

Public Health Reports

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Unusual Infestation of a Ship with Black Widow Spiders

Disabling Illness in Slaughter and Meat Packing Industry

Recovery of *Rickettsia diaporica* from Ticks in Wyoming



FEDERAL SECURITY AGENCY
UNITED STATES PUBLIC HEALTH SERVICE

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It contains (1) current information regarding the prevalence and geographic distribution of communicable diseases in the United States, insofar as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other important communicable diseases throughout the world; (2) articles relating to the cause, prevention, and control of disease; (3) other pertinent information regarding sanitation and the conservation of the public health.

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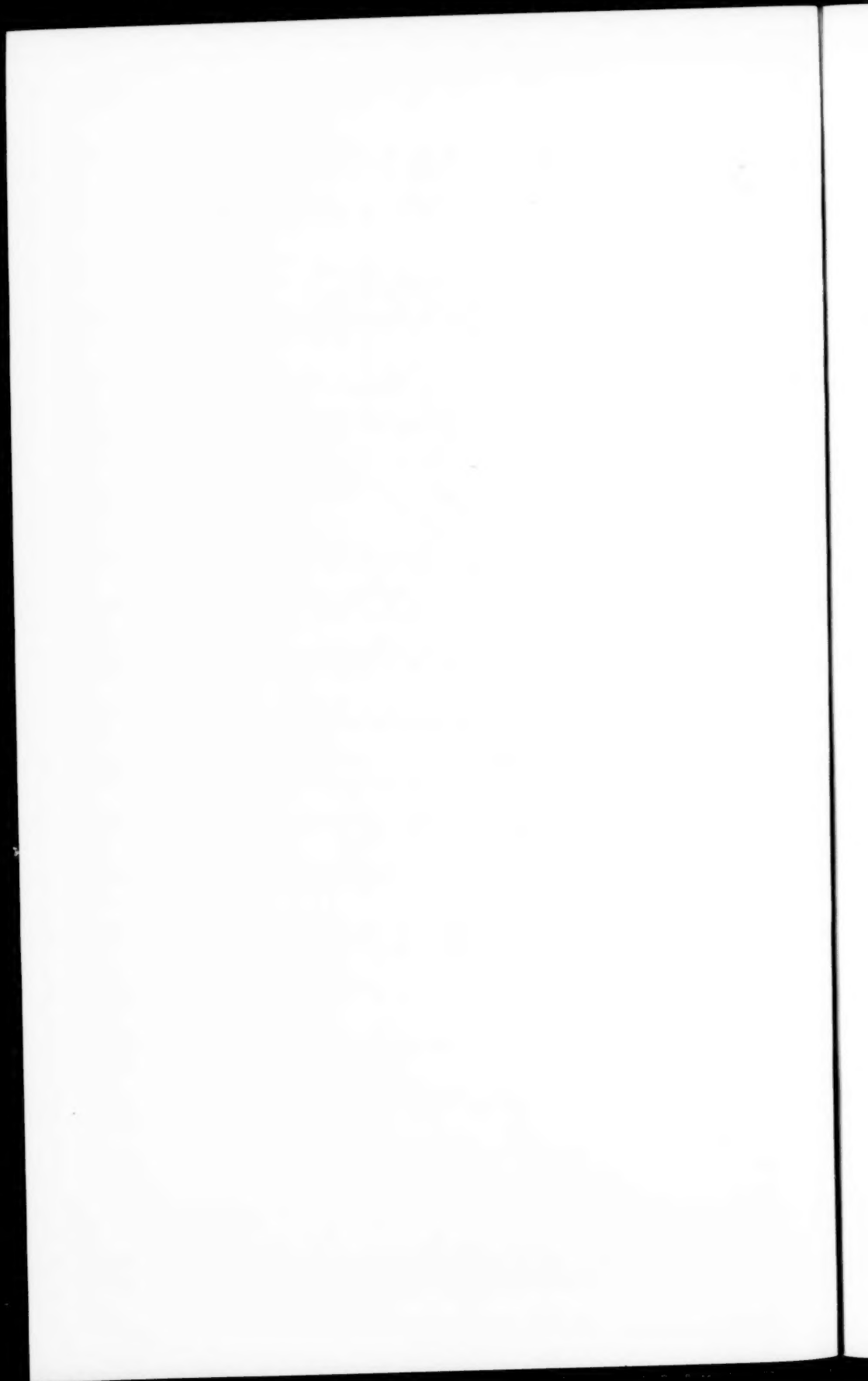
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Public Health Reports

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UNUSUAL INFESTATION OF A SHIP WITH BLACK WIDOW SPIDERS

Recently the Miami Quarantine Station was requested by a ship's captain to investigate the infestation of his ship by spiders which the members of the crew feared were Black Widow spiders (*Latrodectus mactans*). Examination of 30 specimens collected by the crew confirmed the identity, and a careful inspection of the vessel showed a widely distributed infestation. Numerous adults and egg sacs were located about the hull frames, in the crew's quarters, on the under side of mess tables and benches, in the motor compartments of electrical refrigerators, and beneath clothing lockers. Life boats on the ship's deck likewise housed both spiders and egg sacs. It seems quite remarkable that despite this heavy and unusual infestation, no case of spider bite occurred.

Preparations were promptly made to fumigate the vessel. Hydrocyanic acid gas in the proportion of 4 ounces per 1,000 cubic feet of space was introduced and left in for 3 hours. Immediately after fumigation, 49 dead adult Black Widow spiders were recovered and subsequent search accounted for a total of 174.

Examination of egg sacs provided highly interesting details. Prior to fumigation, one egg sac yielded 76 active small spiders. Five of the numerous egg sacs removed from the vessel after fumigation were dissected and the contents tabulated, as follows:

Sac	Number of eggs and dead spiderlings
1.....	137
2.....	273
3.....	150
4.....	154
5.....	168

Previous recorded counts of Black Widow spider egg sac contents have shown an average of from 200 to 300 eggs and spiderlings.

Because of the impossibility of guaranteeing freedom from viable eggs or an occasional pregnant female spider which might have escaped a single fumigation, a second identical fumigation was performed 3 weeks later. Following this fumigation, one adult female

was found dead in a nest in which two feebly-moving, small male spiders were located. Careful search by the crew located several live spiders among gasoline drums carried on the deck. No live adults were found below decks but new webs proved that a complete kill had not been accomplished. Rigid inspection was continued and further fumigation will, if necessary, be resorted to.

In all probability Black Widow spiders have been taken aboard ships from time to time but so heavy an infestation does not appear to have been reported heretofore. On this vessel a coincidental heavy infestation with cockroaches provided an ample food supply for a large spider colony, while the complex type of construction that existed offered extensive safe harborage. Apparently safe harborage and plentiful food accounted for a rapid reproduction rate. One well-fed specimen captured before fumigation spun three egg sacs in 11 days.

CONCLUSIONS

Rapid and extensive colonization of the Black Widow spider on shipboard is possible. Once a heavy infestation has occurred, eradication is difficult and can be accomplished only by means of repeated fumigations supplemented by the most rigid inspection.

DISABLING MORBIDITY AMONG EMPLOYEES IN THE SLAUGHTER AND MEAT PACKING INDUSTRY, 1930-34, INCLUSIVE¹

By HUGH P. BRINTON, *Associate Statistician*, HARRY E. SEIFERT, *Assistant Public Health Engineer*, and ELIZABETH S. FRASIER, *Junior Statistician*, *United States Public Health Service*

This paper presents an analysis of cases of sickness and nonindustrial injuries causing disability lasting 8 calendar days or longer among workers in the meat packing industry. The supporting data are drawn from material collected by the Occupational Morbidity and Mortality Study of the National Health Survey, a survey made possible by a grant from the Works Progress Administration in 1935. The data were transcribed from sick benefit organization records of 15,922 members who were employed in 4 meat packing companies during the period 1930-34. The basic data may be summarized as follows:

¹ From the Division of Industrial Hygiene, National Institute of Health, Washington, D. C.

Readers interested in a description of the industry useful in determining, among other things, the duties connected with the different occupations may consult references 8-11.

Acknowledgment is made to Dr. W. M. Gafaer for suggestions and criticism

Sex	Number of months of membership	Number of cases of disability	Number of days of disability	Number of deaths
Total.....	810,678	7,142	233,158	403
WHITE				
Male.....	625,666	4,951	164,949	300
Female.....	71,083	854	28,723	21
NEGRO				
Male.....	101,717	1,169	34,013	77
Female.....	4,971	110	3,544	4
MEXICAN				
Male.....	60			
Female.....	60	2	46	
OTHER COLORED				
Male.....	2,792	25	848	
Female.....	300	2	30	
UNKNOWN				
Male.....	3,969	28	984	1
Female.....	60	1	21	

From the above table it is evident that on the basis of continuous membership during the entire study period of 60 months there would have been 955,320 months of membership, but actually there were 810,678 months, resulting in an average membership of 51 months instead of 60 for the 5 years.

It will be observed further that white males, white females, and Negro males represent 98.5 percent of the total months of membership. For present purposes the analysis will be limited to this large group of the exposed population.

Type of sick benefit organization.—In the four meat packing establishments studied two provided sick benefits through an employees' sick benefit association and two extended aid through a group insurance plan. The two companies having sick benefit associations represented 97.3 percent of the total months of membership. Both of these associations had the same rules and regulations governing operation. The principal provisions were as follows: Voluntary membership (approximately one-seventh of the employees did not join); a required physical examination for all applicants, excluding those found to have serious physical defects unless they agreed not to accept benefits for disabilities presumably caused by such defects. Eligibility for membership was established as soon as an employee was hired. A waiting period of 7 days was required after onset of disability before sick benefits could begin. Two years was the maximum

time benefits could be paid for one illness. Membership ceased immediately at the termination of service with the company, but after lay-offs membership could be retained for 6 months. Benefits were refused for disabilities connected with the improper use of stimulants or narcotics, "immoral practices," venereal diseases, voluntary self-injury, unlawful acts, and fighting. Maternity cases were aided.

Both of the two remaining companies, which were relatively small in size, required 90 days' service before eligibility for membership was established. In one, membership was voluntary, and in the other it was compulsory. Waiting periods were for 7 and 3 days, respectively, while the maximum benefit period for both was 13 weeks for one illness or 52 weeks for different illnesses in any one year.

Standardization of waiting and maximum benefit periods.—The data for all four sick benefit organizations are presented according to certain standard conditions necessitated by the variations in the length of waiting and maximum benefit periods. The method has been described in the preceding papers of this series. The rules of all but one small company conform to the standard waiting period of 7 days, while the maximum benefit period, except for the two small companies, is much longer than the standard of 13 weeks.

Occupational classification.—Within the meat packing industry there is a very wide variety of occupations, many represented by small numbers of workers. Hence, for statistical purposes, it was necessary to classify these occupations into a limited number of groups so that each would have a sufficient exposure. The object was to combine those occupations which represented approximately the same type of work with working environments as nearly alike as possible. The details of these groupings are shown in table 1.

TABLE 1.—*Specific occupations comprising each occupational group, slaughter and meat packing industry*

WHITE MALES

Occupational group	Specific occupation
Office workers.....	Accountants, auditors, bookkeepers, cashiers, clerks, officials, purchasing agents, and salesmen.
Foremen.....	Foremen, all departments.
Cold-storage workers.....	Laborers in cold storage, loaders, luggers, and railmen.
Warm meat workers.....	Beef pullers, butchers, head splitters, laborers, pork hangers, scrappers, skinners, stickers, trimmers, washers.
Cold meat workers.....	Boners, knifemen, laborers, luggers, meat cutters, slitters, trimmers, truckers.
Byproducts workers.....	Beamsters, butter makers, carders, churn men, cooks, fertilizer men, hammers, hide men, hide spreaders and wheelers, kettlemen, laborers in fertilizer and glue departments, laborers in hide department, laborers in lard and butterine departments, lard men, pressmen, pressmen (glue department), refiners, salters (hides), scrubbers, tankmen (glue department), wool driers, wool pullers.
Maintenance workers.....	Blacksmiths, boilermakers, bricklayers, carpenters and helpers, car repairers, construction laborers, electricians, machinists, mechanical laborers, mechanics, millwrights, oilers, painters, plumbers, steam-fitters, tinnerns and helpers.
Curing workers.....	Cookers, firemen, laborers in pickle department, laborers in smokehouse, meat salters and laborers, pickle makers, picklemen, smokers, tubmen.
Sausage and casing workers.....	Casing cleaners, sterilizers, and washers; choppers; cutters; grinders; laborers in casing department; linkers and laborers in sausage department; sausage makers and cooks; stuffers.
All others.....	Cattle drivers; chauffeurs; chefs; chemists; cleaners; coopers; crate and box makers; dishwashers; doctors; elevator operators; firemen; garage laborers; general laborers; harness and stable hands; inspectors, checkers, and graders (all departments); janitors; laborers in box shop; laborers in cooperage shop; laborers in ice gang; laborers in power plant; packers; policemen; printing-press feeders; printers; scalers; sealers; slicers; stationary engineers; steamers; teamsters; telegraph operators; tin-pail makers; truck and tractor drivers; waiters; watchmen; wrappers; yard laborers.

TABLE 1.—*Specific occupations comprising each occupational group, slaughter and meat packing industry—Continued*

WHITE FEMALES	
Occupational group	Specific occupation
Office workers.....	Bookkeepers, cashiers, clerks.
Sausage and casing workers.....	Casing cleaners, sterilizers, and washers; cutters; grinders; laborers in casing department; linkers and laborers in sausage department; sausage makers and cooks; stuffers; trimmers.
Scalers, wrappers, and packers..	Carton makers, packers, scalers, sealers, wrappers.
All others.....	Boners; casing workers; general laborers; inspectors, checkers, and graders (all departments); kitchen workers; laborers in lard and butterine departments; office machine operators; seamstresses; stenographers; telephone operators; tin-pail and can stackers; tin-pail machine operators; trimmers; waitresses.
NEGRO MALES	
Warm and cold meat workers..	Beef pullers, boners, butchers, head splitters, knifemen, laborers, skinnners, trimmers.
Byproducts workers.....	Beamsters, carders, cooks, fertilizer men, hashers, hide men, hide spreaders and wheelers, kettlemen, laborers in fertilizer and glue departments, laborers in hide department, laborers in lard and butterine departments, lard men, pressmen, pressmen (glue department), refiners, salters (hides), scrubbers, tankmen, wool driers, wool pullers.
Curing workers.....	Cookers, firemen, laborers in pickle department, laborers in smokehouse, meat salters and laborers, pickle makers, picklemen, smokers, tubmen.
Sausage and casing workers....	Casing cleaners, sterilizers, and washers; choppers; cutters; grinders; laborers in casing department; linkers and laborers in sausage department; sausage makers and cooks; stuffers.
All others.....	Car-shop laborers; cold-storage laborers; coopers; garage laborers; general laborers; inspectors, graders, and checkers (all departments); janitors; maintenance laborers; packers; pipefitters; power-plant laborers; truck drivers; yard laborers.

It will be observed that in most instances the same broad occupational groups or combinations of groups have been used for white males, white females, and Negro males. An exception is scalers, wrappers, and packers, a group among white females which is included under "All others" for white males.

ANALYSIS OF THE DATA

Age distribution by occupational group.—A comparison of the age distribution of gainful workers in the slaughter and packing house industry as given in the United States census of 1930 (12, pp. 462-463) with the age distribution of the membership in the present study is shown in the following table:

Age	Percentage distribution			
	Male		Female	
	U. S. census, 1930	Present study	U. S. census, 1930	Present study
Total, known ages.....	100.0	100.0	100.0	100.0
Under 25.....	20.5	5.1	47.3	24.2
25-34.....	28.7	29.7	26.7	38.0
35-44.....	25.0	34.1	17.2	27.7
45-54.....	15.9	21.4	6.7	9.1
55-64.....	7.4	8.8	1.7	.9
65 and over.....	2.5	.9	.4	.1

For both sexes the greatest difference was for persons under 25 years, which formed a much larger proportion of the total in the census data. At the opposite extreme, there was little difference in

the percentage of persons in the oldest age groups. For example, 9.9 percent of the males according to the census and 9.7 percent of the males in the present study were 55 years and over. Percentages for females 45 years and over were 8.8 and 10.1, respectively. A somewhat smaller percentage for both sexes was observed in the middle age group, 35-44 years, in the census data.

The percentage distribution of months of membership by age for white males, white females, and Negro males is shown, among other things, in table 2. It will be noted that the greatest concentration of white males is in the age group 35-44 years; for white females the maximum number is in the next earlier age group, 25-34 years; while the maximum for Negro males is almost evenly divided between 25-34 and 35-44 years. For white females there is a much larger percentage of membership (63.0 percent) under 35 years of age than for white males (34.6 percent) or Negro males (36.0 percent). Negro males have the smallest percentage under 25 years and white females the smallest percentage 65 years and over.

TABLE 2.—Percentage distribution of months of membership, by age, sex, and race, according to occupational group, employees in the slaughter and meat packing industry, 1930-34, inclusive

Occupational group ¹	All known ages (100%)	Age in years as of July 1, 1932					
		Under 25	25-34	35-44	45-54	55-64	65 and over
WHITE MALES							
All occupations.....	624,211	5.7	28.9	34.0	21.5	9.0	0.9
Office workers.....	186,330	6.0	33.2	34.0	18.6	7.5	.7
Foremen.....	43,769	1.0	15.3	34.7	30.4	17.6	1.0
Cold-storage workers.....	30,755	9.2	35.3	31.4	18.0	5.6	.5
Warm meat workers.....	52,521	7.4	28.5	38.0	19.4	6.2	.5
Cold meat workers.....	31,039	4.8	29.5	36.3	24.0	5.0	.4
Byproducts workers.....	35,311	6.6	25.5	33.9	25.1	8.3	.6
Maintenance workers.....	74,364	4.3	24.0	35.0	24.6	10.6	1.5
Curing workers.....	32,511	5.6	30.7	35.5	19.7	7.6	.9
Sausage and casing workers.....	33,559	8.3	32.8	34.1	18.7	5.8	.3
All others.....	104,052	5.6	27.9	30.7	22.1	12.1	1.6
WHITE FEMALES							
All occupations.....	70,923	25.7	37.3	27.1	9.0	.8	.1
Office workers.....	19,495	20.1	50.1	22.0	7.4	.4	-----
Sausage and casing workers.....	8,826	20.1	23.9	44.2	11.8	-----	-----
Scalers, wrappers, and packers.....	17,643	33.7	38.9	20.6	5.7	.9	.2
All others.....	24,959	26.3	31.1	29.6	11.8	1.2	(²)
NEGRO MALES							
All occupations.....	101,597	1.2	34.8	34.7	21.3	7.4	.6
Warm and cold meat workers.....	27,385	1.4	34.3	37.1	20.5	6.0	.7
Byproducts workers.....	19,737	1.3	38.9	32.9	20.9	5.4	.4
Curing workers.....	8,812	.8	28.5	42.4	19.8	8.5	(²)
Sausage and casing workers.....	9,633	1.0	45.7	30.3	17.5	5.5	-----
All others.....	36,030	1.0	31.5	33.2	23.4	10.0	.9

¹ See table 1.

² Less than 0.1 of 1 percent.

Table 2 also shows the distribution of months of membership according to occupational group and age. Among white males membership definitely younger than the average was shown for office workers, cold-storage workers, and sausage and casing workers. In these occupations more than 39 percent of the membership was under 35 years of age. Foremen, with 18.6 percent, and maintenance workers, with 12.1 percent aged 55 years and over, were the occupations with the oldest membership.

Sausage and casing workers composed a young group among Negro as well as among white males. Byproducts workers were a young group among Negro males. There were two occupational groups among white females which had an especially young membership, namely, office workers, with 70.2 percent, and scalers, wrappers, and packers, with 72.6 percent under 35 years of age. In no specific occupational group, either among Negro males or white females, was there as much as 9 percent of the membership 55 years of age and over.

Selected indexes by age group, sex, and color.—From table 3 it will be observed that there is a general uniformity in the relative magnitude of the different indexes with respect to sex and race. Negro males make a more unfavorable showing than white males, except in the average number of days per case. White females have higher indexes than either white males or Negro males. These relationships are found to exist in each of the principal age groups having a relatively large membership.

The annual number of cases per 1,000 persons among white males ranged from 70.7 under 25 years to 171.1 at 65 years of age and older. For white females the rate ranged from 122.5 under 25 years to 202.2 at 45–54 years. The rate for Negro males under 25 years was 91.2, and the rate at 55–64 years was 220.2. Except where the exposure was very limited there was a steady increase with age in the frequency of disabilities.

The annual number of days of disability per person followed a similar trend. There was a more rapid rate of increase with age for white males than for Negro males. Past middle age, the rates for white males and females and Negro males approached each other, while in youth there was wide divergence among these groups.

Beginning with the age group 25–34 years and continuing through 55–64 years Negro males had the shortest average number of days per case. This contrasts with the 2 rates previously given, namely, the number of cases per 1,000 persons and the number of days of disability per person, which for the same age periods showed a higher rate for Negro than for white males. With respect to the length of case the rate of increase with age was comparatively regular except at the extremes of youth and old age. The differences according to sex and race are less than for the other indexes of morbidity.

TABLE 3.—*Summary of selected morbidity indexes for different age groups, according to sex and race, employees in the slaughter and meat packing industry, 1930-34, inclusive*

Sex and race	All ages ¹	Age in years as of July 1, 1932					
		Under 25	25-34	35-44	45-54	55-64	65 and over
		ANNUAL NUMBER OF CASES PER 1,000 PERSONS ²					
White male.....	95.0	70.7	72.3	91.7	107.3	158.7	171.1
White female.....	144.2	122.5	145.4	146.6	202.2	88.5	-----
Negro male.....	137.9	91.2	125.3	133.5	139.4	220.2	147.3
		ANNUAL NUMBER OF DAYS OF DISABILITY PER PERSON					
White male.....	3.16	1.84	2.02	2.79	3.84	6.85	9.35
White female.....	4.85	3.48	4.65	5.44	7.79	6.57	-----
Negro male.....	4.01	3.12	3.12	3.59	4.68	7.93	9.58
		AVERAGE NUMBER OF DAYS PER CASE ³					
White male.....	33.3	26.1	27.9	30.5	35.8	43.2	54.6
White female.....	33.6	28.4	32.0	37.1	38.5	74.2	-----
Negro male.....	29.1	34.2	24.9	26.9	33.6	36.0	65.0
		NUMBER OF CASES BEGINNING DURING 1930-34 INCLUSIVE					
White male.....	4,951	211	1,087	1,622	1,198	741	81
White female.....	854	186	321	235	108	4	-----
Negro male.....	1,169	9	369	392	251	139	8
		NUMBER OF CALENDAR DAYS OF DISABILITY					
White male.....	164,949	5,500	30,308	49,408	42,942	31,990	4,425
White female.....	28,723	5,279	10,257	8,729	4,161	297	-----
Negro male.....	34,013	308	9,202	10,541	8,425	5,005	520
		NUMBER OF DEATHS					
White male.....	300	5	33	68	85	85	23
White female.....	21	4	8	6	2	1	-----
Negro male.....	77	2	18	20	18	17	2
		NUMBER OF PERSON-YEARS OF MEMBERSHIP					
White male.....	52,138.8	2,986.2	15,026.9	17,693.2	11,168.8	4,669.2	473.3
White female.....	5,923.6	1,517.9	2,207.0	1,603.2	534.2	45.2	2.8
Negro male.....	8,476.4	98.7	2,944.8	2,937.2	1,800.1	631.3	54.3

¹ Includes a negligible number of persons of unknown age.² Cases include only those which began during the study period, but days of disability include days for cases which began prior to, as well as during, the study period. This seeming excess of days of disability is compensated in part by the fact that days subsequent to 1934 are not included, even though some cases had not ended or reached 91 days at the close of the study period.³ Includes all days of disability during the study period, regardless of when the disability began. Disabilities which reached 91 days or over were arbitrarily terminated at 91 days.

Frequency of disabilities by detailed diagnosis groups.—The annual number of cases per 1,000 for white males, white females, and Negro males for 2 broad age groups and according to detailed diagnosis groups is shown in table 4. Considering white male cases it will be observed that only 3 diagnosis groups show a decrease in the rate for

persons 35 years of age and older. These groups are diseases of the pharynx and tonsils, appendicitis, and other infectious and parasitic diseases, all of which showed similar trends in the soap industry (6). Among white females there is a decrease with age for diseases of the pharynx and tonsils, respiratory tuberculosis, diseases of the teeth and gums, ulcer of the stomach or duodenum, diarrhea and enteritis, appendicitis, diseases of the nervous system, and diseases of the skin. Negro males show a decrease for the same diagnosis groups as white males, with the addition of pleurisy and respiratory tuberculosis.

TABLE 4.—*Frequency of sickness and nonindustrial injuries causing disability lasting 8 calendar days or longer, by sex and race, for the age groups under 35 years and 35 years and over, according to detailed diagnosis groups, employees in the slaughter and meat packing industry, 1930-34, inclusive*

Diagnosis	Annual number of cases per 1,000 persons					
	White males		White females		Negro males	
	Under 35 years	35 years and over	Under 35 years	35 years and over	Under 35 years	35 years and over
Total, all diagnoses.....	72.1	107.1	136.1	158.8	124.2	145.7
Nonindustrial injuries.....	12.2	14.2	15.6	15.6	23.7	15.9
Sickness.....	59.9	92.9	120.5	143.2	100.5	129.8
Respiratory diseases.....	29.6	36.8	59.3	59.5	53.6	62.9
Diseases of the pharynx and tonsils.....	7.4	3.8	16.4	6.9	6.9	5.5
Bronchitis, acute and chronic.....	2.2	3.4	4.3	5.5	5.6	7.0
Other diseases of the upper respiratory tract.....	3.5	4.9	6.7	9.6	3.6	5.7
Influenza, grippé.....	13.5	19.5	28.4	32.5	26.0	35.0
Pneumonia, all forms.....	1.0	2.0	1.1	1.8	2.6	4.1
Pleurisy.....	.9	1.4	.5	2.3	4.9	3.5
Respiratory tuberculosis.....	.6	1.5	1.3	.9	3.6	1.9
Other respiratory diseases.....	.8	.3	.6	1.0	.2
Digestive diseases.....	10.7	14.2	23.6	20.6	13.1	14.7
Diseases of the teeth and gums.....	.4	.8	1.1	.9	1.0	1.3
Ulcer of the stomach or duodenum.....	.9	1.2	.8	.5	.5	1.1
Other diseases of the stomach, cancer excepted.....	.7	1.8	1.3	5.0	3.6	2.2
Diarrhea, enteritis.....	.7	2.1	3.0	2.7	3.6	4.0
Appendicitis, with or without appendectomy.....	5.9	3.4	14.2	5.5	2.6	1.5
Hernia.....	1.1	2.23	1.7
Other digestive diseases.....	1.0	2.7	3.2	6.0	1.7	2.9
Nonrespiratory-nondigestive diseases.....	18.6	40.4	36.2	59.9	30.9	50.0
Diseases of the circulatory system.....	2.1	8.2	1.6	6.9	2.6	9.4
Genitourinary diseases.....	1.4	3.7	5.6	11.0	2.3	5.9
Rheumatic diseases ¹	3.6	12.8	3.5	16.9	15.1	21.0
Diseases of the nervous system ²	1.3	3.1	3.5	2.7	.7	3.3
Diseases of the skin.....	1.9	3.0	4.3	4.1	1.0	1.9
Other infectious and parasitic diseases.....	4.8	3.2	5.1	5.9	5.9	3.5
Other nonrespiratory-nondigestive diseases.....	3.5	6.4	12.6	12.4	3.3	5.0
Ill-defined or unknown diagnoses.....	1.0	1.5	1.4	3.2	2.9	2.2
Number of person-years of membership.....	18,013.1	34,004.5	3,724.9	2,185.4	3,043.6	5,422.8

¹ Including acute and chronic rheumatism, lumbago, neuralgia, neuritis, and sciatica.

² Exclusive of neuralgia, neuritis, and sciatica.

NORZ.—See footnote 2, table 3.

Italicized rates are based on less than 5 cases.

Among persons under 35 years of age white females showed the highest frequency rate for sickness; however, Negro males had a higher rate for bronchitis, pneumonia, pleurisy, tuberculosis, diarrhea and enteritis, hernia, diseases of the circulatory system, rheumatic diseases, and other infectious and parasitic diseases. White males had a higher rate than white females for pleurisy, ulcer of the stomach or

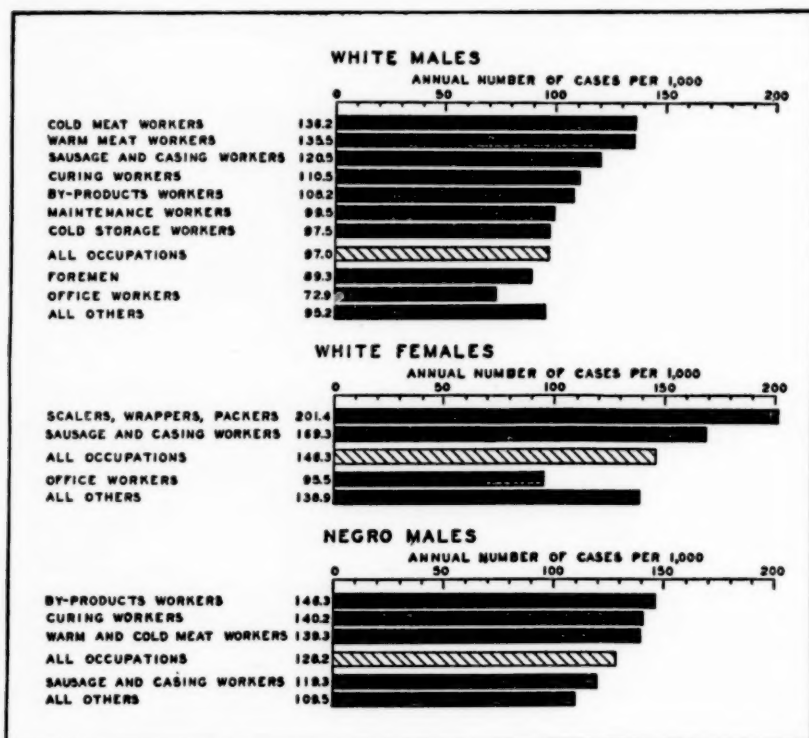


FIGURE 1.—Annual number of cases per 1,000 white males, white females, and Negro males, respectively, of sickness and nonindustrial injuries causing disability lasting 8 calendar days or longer, according to occupational group, employees in the slaughter and meat packing industry, 1930-34, inclusive. (The rates are age-standardized according to the total white gainfully employed workers in the United States.)

duodenum, hernia, diseases of the circulatory system, and rheumatic diseases.

White females 35 years of age and over also had a higher frequency of sickness than Negro males, although the percentage excess was only one-half as great as in the younger age group. The rate among white males was less than among white females, except for pneumonia, respiratory tuberculosis, ulcer of the stomach or duodenum, hernia, diseases of the circulatory system, and diseases of the nervous system. Nearly the same group of diseases showed a higher frequency among males in an analysis of data from the soap industry (6).

Rates by occupation.—The frequency rate, the number of days of disability per person, and the number of days per case are shown ac-

cording to occupational group in table 5. The age-standardized frequency rate for white males, as shown in figure 1, ranges from 72.9 for office workers to 136.2 for cold meat workers. For white females, office workers, with a rate of 95.5, form the occupational group with the lowest frequency, while scalers, wrappers, and packers have the highest rate, 201.4. Among Negro males the rate varies from 146.3 for byproducts workers to 119.3 for sausage and casing workers. Except for office workers, each rate for white females is higher than any rate for white males.

TABLE 5.—*Frequency of sickness and nonindustrial injuries causing disability lasting 8 calendar days or longer, annual number of days of disability per person, and average number of days per case, according to occupational group, sex, and race, employees in the slaughter and meat packing industry, 1930-34, inclusive*

Occupational group ¹	Annual number of cases per 1,000 persons		Annual number of days of disability per person	Average number of days per case	Number of cases beginning during 1930-34, inclusive	Number of calendar days of disability	Number of person-years of membership
	Standardized rate ²	Crude rate					
WHITE MALES							
All occupations.....	97.0	95.0	8.16	33.3	4,951	164,949	52,138.8
Cold meat workers.....	136.2	129.7	4.39	33.8	336	11,372	2,589.6
Warm meat workers.....	135.5	128.8	4.14	32.1	565	18,150	4,386.7
Sausage and casing workers.....	120.5	112.6	3.61	32.1	315	10,104	2,798.1
Curing workers.....	110.5	106.5	3.45	32.4	289	9,358	2,712.6
Byproducts workers.....	108.2	106.3	3.81	35.8	314	11,251	2,952.6
Maintenance workers.....	99.5	100.8	3.53	35.0	626	21,914	6,212.5
Cold-storage workers.....	97.5	90.3	2.87	31.8	232	7,378	2,568.0
Foremen.....	89.3	97.5	3.82	39.2	357	13,984	3,661.2
Office workers.....	72.9	69.5	2.12	30.5	1,082	32,986	15,572.5
All others.....	95.2	96.1	3.28	34.1	835	28,452	8,685.0
WHITE FEMALES							
All occupations.....	146.3	144.2	4.85	33.6	854	28,723	5,923.6
Scalers, wrappers, and packers.....	201.4	194.3	6.86	35.3	286	10,098	1,472.0
Sausage and casing workers.....	169.3	170.0	6.60	38.8	125	4,851	735.5
Office workers.....	95.5	94.5	2.71	28.7	154	4,421	1,629.6
All others.....	138.9	138.5	4.48	32.4	289	9,353	2,086.5
NEGRO MALES							
All occupations.....	128.2	137.9	4.01	29.1	1,169	34,013	8,476.4
Byproducts workers.....	146.3	155.0	4.25	27.4	255	6,984	1,644.7
Curing workers.....	140.2	152.5	3.74	24.5	112	2,747	734.3
Warm and cold meat workers.....	139.3	148.5	4.51	30.3	339	10,283	2,282.1
Sausage and casing workers.....	119.3	125.8	3.57	28.3	101	2,863	802.8
All others.....	109.5	120.2	3.70	30.8	362	11,136	3,012.5

¹ See table 1.

² Age standardized according to the total gainfully employed workers of specified sex and race in the United States (12, p. 117).

NOTE.—See footnotes 2 and 3, table 3.

The annual number of days of disability per person varies by occupation in nearly the same manner as the frequency rate. Among white males the former rate is more favorable than the latter for

WHITE FEMALES

All occupations.....	136.1	158.8	1.00	1.00	15.6	15.6	1.00	1.00	59.3	59.5	1.00	1.00	23.6	20.6	1.00	1.00	36.2	59.9	1.00	1.00	3,724.9	2,185.4
Office workers.....	95.6	93.0	.70	.59	5.3	4.1	.34	.26	50.8	45.5	.86	.76	16.7	14.5	.71	.70	21.9	26.9	.60	.45	1,140.7	483.9
Sausage and casing workers.....	142.3	191.6	1.05	1.21	12.4	26.7	.79	1.71	52.6	38.8	.89	.66	24.7	41.2	1.05	2.00	52.6	82.5	1.45	1.38	323.2	412.3
Scalers, wrappers, and packers.....	181.7	228.6	1.34	1.44	19.7	17.4	1.26	1.12	81.5	101.9	1.37	1.71	30.9	17.4	1.31	.84	46.8	84.5	1.26	1.41	1,067.9	402.4
All others.....	132.4	147.7	.97	.93	22.6	15.8	1.45	1.01	49.5	57.5	.83	.97	23.5	15.8	1.00	.77	36.0	56.4	.99	.94	1,193.1	886.8

NEGRO MALES

All occupations.....	124.2	145.7	1.00	1.00	23.7	15.9	1.00	1.00	53.6	62.9	1.00	1.00	13.1	14.7	1.00	1.00	30.9	50.0	1.00	1.00	3,043.6	5,422.8
Warm and cold meat workers.....	116.5	166.4	.64	1.14	20.8	16.4	.88	1.03	50.3	78.4	.94	1.25	13.5	15.0	1.03	1.02	31.9	52.5	1.03	1.05	815.5	1,406.6
Byproducts workers.....	164.7	148.6	1.33	1.02	30.2	13.2	1.27	.83	77.1	59.0	1.44	.94	15.1	18.3	1.15	1.24	39.3	54.0	1.27	1.08	661.9	982.8
Curing workers.....	143.9	156.1	1.16	1.07	37.1	15.4	1.57	.97	65.0	65.5	1.21	1.04	13.9	11.6	1.06	.79	27.9	59.8	.90	1.20	215.5	518.8
Sausage and casing workers.....	125.5	126.1	1.01	.87	21.4	16.3	.80	1.03	58.7	39.7	1.10	.63	13.4	16.4	1.02	1.12	26.7	53.7	.86	1.07	374.6	428.2
All others.....	98.4	130.8	.79	.90	19.5	16.8	.82	1.06	35.9	57.7	.67	.92	11.3	13.3	.86	.90	26.6	43.0	.86	.86	976.1	2,026.4

¹ See table 1.

² Includes a negligible number of cases of ill-defined or unknown diagnosis.

NOTE.—See footnote 2, table 3

curing workers and sausage and casing workers, groups which are relatively young and consequently are likely to have shorter cases. Foremen, who are an older group, have the third from the highest rate per person, although their frequency rate is next to the lowest.

The average number of days per case is strongly influenced by age composition, with the result that among white males maintenance workers and foremen are in an unfavorable position with respect to this measure of disability. Workers in warm and in cold meats, and sausage and casing workers make a more favorable showing for the average number of days per case than for the other two rates.

Frequency of disabilities by occupation, age, and broad diagnosis groups.—Occupational rates are more significant when age and diagnosis are taken into consideration. The magnitude of the available data permitted only the classification of cases falling within each occupational group into age groups under 35 years and 35 years and over and into four broad diagnosis groups. The resulting frequency rates are shown in table 6.

It is of interest to know the diagnosis which is relatively the most unfavorable for a particular occupation. For white males under 35 years of age the highest ratio of specific rate to rate for all occupations was as follows: Nonindustrial injuries among sausage and casing, byproducts, and cold meat workers; respiratory diseases among curing workers; digestive diseases among office workers; and nonrespiratory-nondigestive diseases among foremen, cold-storage, warm meat, and maintenance workers. It would appear that there is an association of high frequency rates for all causes with an excess of nonindustrial injuries, while low rates are associated with an unfavorable amount of digestive diseases. The highest ratios for white males 35 years and over were nonindustrial injuries among sausage and casing, maintenance, and cold meat workers; respiratory diseases among office, cold-storage, and byproducts workers; nonrespiratory-nondigestive diseases among foremen, warm meat, and curing workers. The only occupations which had the same unfavorable diagnosis group at both the older and younger ages were sausage and casing workers, foremen, warm meat workers, and cold meat workers.

Among white females the occupations with the highest ratios of specific to total rate were the same for both age groups, namely, respiratory diseases among office workers and scalers, wrappers, and packers; nonrespiratory-nondigestive diseases among sausage and casing workers.

Negro males under 35 years of age showed the highest ratios for nonindustrial injuries among curing workers, respiratory diseases among byproducts workers and sausage and casing workers, and nonrespiratory-nondigestive diseases among warm and cold meat workers. At 35 years and over the highest ratio of specific rate to rate for all occupa-

tions was for respiratory diseases among warm and cold meat workers, digestive diseases among byproducts and sausage and casing workers, and nonrespiratory-nondigestive diseases among curing workers.

When the magnitude of the frequency rates is examined it is found that respiratory diseases have the highest rate of the 4 diagnosis groups in 15 out of 16 occupations (specific for sex and race) among persons under 35 years of age, and in 8 out of 16 occupations among those 35 years and over. In the remaining occupations nonrespiratory-nondigestive diseases have the highest rates. For persons under 35 years the actual rates among white males range from the lowest to the highest in each diagnosis group as follows: Nonindustrial injuries, 8.0 to 30.4, respiratory diseases, 16.9 to 45.1, digestive diseases, 6.1 to 13.7, and nonrespiratory-nondigestive diseases, 11.7 to 28.6. For persons 35 years and over the range is not so wide, being 8.9 to 23.1 for nonindustrial injuries, 30.6 to 51.2 for respiratory diseases, 11.4 to 20.0 for digestive diseases, and 28.0 to 60.6 for nonrespiratory-nondigestive diseases.

There were five occupations among white males which showed an increase of more than 50 percent in the frequency rate of persons 35 years of age and over as compared with those under 35 years of age. In decreasing order of magnitude these were foremen, 84 percent; warm meat workers, 59 percent; sausage and casing workers, 56 percent; curing workers, 54 percent; and office workers, 52 percent. All but two occupations among white males showed nonrespiratory-nondigestive diseases as having the greatest percentage increase with age. The exceptions were cold meat and maintenance workers, among whom digestive diseases ranked first. Decreases for nonindustrial injuries were revealed in four occupations.

White females showed a much smaller percentage increase in rate with age. Office workers had a decrease of 3 percent in the total rate, and the only diagnosis group with an increase for these workers was nonrespiratory-nondigestive diseases. Decreases were observed in the nonindustrial injury and digestive disease rates among scalers, wrappers, and packers, and in the respiratory disease rate among sausage and casing workers.

Negro males did not show a consistent increase in rate with age. A marked increase occurred only among warm and cold meat workers. In every instance the nonindustrial injury rate was less, respiratory and digestive diseases showed little change, while nonrespiratory-nondigestive diseases increased.

Certain specific diseases were found to be more common in certain occupations. Thus, among others, diseases of the skin, which had a frequency rate of 1.9 for all white males under 35 years, had a rate of 5.1 for workers in warm meat and 5.6 for cold meat workers. All white females 35 years of age and over had a rate of 2.7 for diseases

of the nervous system, while office workers had a rate of 6.2 for this diagnosis. Most prominent among the diseases showing great variation in rate according to occupation is rheumatism. The following table gives the rheumatic rate² per 1,000 white males:

Occupational group	Annual number of cases per 1,000 white males		Ratio: Specific occupation to all occupations		Percent-age change, under 35 years to 35 years and over
	Under 35 years	35 years and over	Under 35 years	35 years and over	
All groups.....	3.6	12.8	1.00	1.00	254
Office workers.....	1.1	5.1	.31	.40	354
Foremen.....	10.1	8.2	2.81	.64	-19
Cold-storage workers.....	6.1	14.1	1.69	1.10	131
Warm meat workers.....	3.8	23.5	1.06	1.84	518
Cold meat workers.....	3.4	18.8	.94	1.47	453
Byproducts workers.....	6.3	17.0	1.75	1.33	170
Maintenance workers.....	4.0	14.0	1.11	1.09	250
Curing workers.....	7.1	20.9	1.97	1.63	194
Sausage and casing workers.....	3.5	18.8	.97	1.47	437
All others.....	3.8	14.0	1.06	1.09	268

Among persons in the younger age group it appears that foremen had a rate more than nine times as great as office workers. High frequency rates for rheumatism occurred among older warm and cold meat workers. These, along with curing workers and sausage and casing workers, had rheumatic disease rates above 18.0 as compared with 12.8 for all occupations. The total for all occupations among Negro males showed higher rates for each age group, namely, 15.1 for persons under 35 years and 21.0 for those 35 years and over. The corresponding rates for warm and cold meat workers combined were 13.5 and 26.6. The latter constituted the maximum rheumatic rate for the older group of Negroes. Among the younger Negroes, byproducts workers were highest, with a rate of 24.2. White females under 35 years had a rate of 3.5, approximately the same as white males, but for the older age group the increase was more sharp, reaching a rate of 16.9. The highest rheumatic rate for any sex or race was 29.1 for white female sausage and casing workers 35 years of age and over.

Environmental conditions.—In addition to the calculation of morbidity rates, by occupation, it is possible to determine the environmental conditions for certain groups. These should be understood to be merely qualitative, since the degree and duration of exposure to such conditions are not known. It is probable that fluctuations in the magnitude of rates for environmental conditions are more definitely limited to influences within the plant than are occupational groups, which are more likely to represent differences in socio-economic status, with consequent variation in rates due to factors operating outside of the plant as well as inside of it.

² Rheumatism, in this report, includes acute and chronic rheumatism, lumbago, neuralgia, neuritis, and sciatica.

Table 7 gives disability rates for certain environmental conditions.

TABLE 7.—*Frequency of sickness and nonindustrial injuries causing disability lasting 8 calendar days or longer, annual number of days of disability per person, and average number of days per case, for specified environmental conditions, white MALE and Negro MALE employees in the slaughter and meat packing industry, 1930-34, inclusive*

Environmental conditions	Annual number of cases per 1,000 persons	Annual number of days of disability per person	Average number of days per case	Number of cases beginning during 1930-34, inclusive	Number of calendar days of disability	Number of person-years of membership
WHITE MALES						
All conditions.....	95.0	3.16	33.3	4,951	164,949	52,138.8
Close contact with general public.....	84.3	2.79	33.1	300	9,917	3,560.4
Extreme dry or radiant heat.....	84.5	3.27	38.7	102	3,950	1,207.8
Extreme cold.....	94.1	3.05	32.4	149	4,826	1,582.9
Sudden temperature change.....	100.3	3.06	30.5	122	3,720	1,216.3
High humidity or wet conditions.....	128.1	4.29	33.5	686	22,952	5,355.8
All others.....	91.6	3.05	33.3	3,592	119,584	39,215.6
NEGRO MALES						
All conditions.....	137.9	4.01	29.1	1,169	34,013	8,476.4
High humidity or wet conditions.....	141.0	4.02	28.5	303	8,629	2,148.6
All others.....	136.9	4.01	29.3	866	25,384	6,327.8

NOTE.—See footnotes 2 and 3, table 3.

Among white males the frequency rates varied from 84.3 for those in close contact with the general public to 128.1 for those exposed to high humidity or wet conditions. Sudden temperature change was the only other condition showing a rate greater than 100. Similarly, the annual number of days of disability per person was lowest, 2.79, for close contact with the public and highest, 4.29, for high humidity or wet conditions. The average number of days per case showed a different order of importance, with a low of 30.5 for sudden temperature change and a high of 38.7 for extreme dry or radiant heat. The latter average is influenced by a rate of 51.8 days per case for non-respiratory-nondigestive diseases.

The frequency rate among Negro males for high humidity or wet conditions is 10.1 percent higher than for white males with the same environment, while the average number of days of disability per person and the average number of days per case are 6.3 and 14.9 percent less, respectively.

Figure 2 shows the ratio of the frequency rate for high humidity or wet conditions to the rate for all environmental conditions for the groups under 35 years of age and 35 years and over. It is evident that the rate for Negro males is little influenced by humid conditions for either age group or any broad diagnosis group. The highest ratio for Negroes (1.33) is for digestive diseases among persons under 35

years of age, yet the lowest ratio (0.74) is for this same diagnosis group among Negro males 35 years of age and over. White males in every instance have a higher rate for persons working under high humidity or wet conditions than for all conditions. This tendency is most marked for both age groups for nonrespiratory-nondigestive diseases, with an excess of rheumatic diseases forming the most important factor.

The two environmental conditions which had the highest rates are shown by broad diagnosis groups for young and old males in table 8. For all diagnoses among white males the excess in the specific rate compared with the rate for all conditions varied between 27 and 38 percent for both age groups of males exposed to high humidity or wet conditions and for the younger males exposed to sudden tempera-

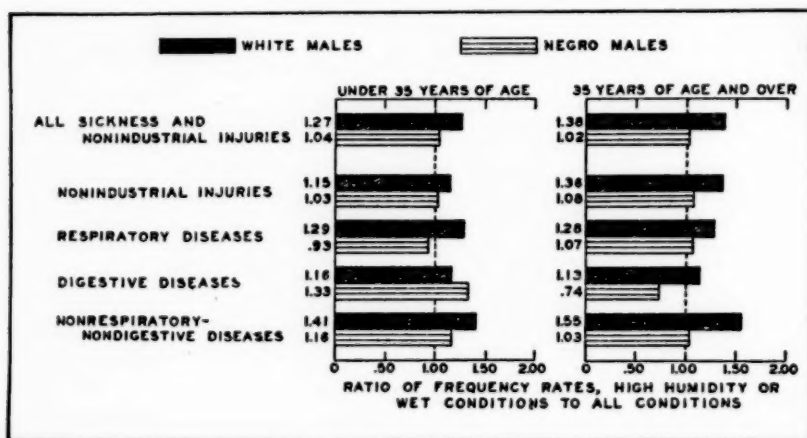


FIGURE 2.—Ratio of annual number of cases per 1,000 persons exposed to high humidity or wet conditions to annual number of cases per 1,000 persons for all conditions, by age under 35 years and 35 years and over, according to broad diagnosis groups, white male and Negro male employees in the slaughter and meat packing industry, 1930-34, inclusive. Cases include disabilities from sickness and nonindustrial injuries lasting 8 calendar days or longer.

ture change. Only for the older males in the latter group was there no excess in rate. Particular diagnosis groups showed greater variation. Nonrespiratory-nondigestive diseases were decidedly more common among white males exposed to high humidity or wet conditions; the excess amounted to 41 percent when young and 55 percent when older.

No diagnosis group among Negro males exposed to high humidity or wet conditions showed a marked excess in rate over all conditions. Under 35 years of age the ratio of Negro to white rate for high humidity or wet conditions was 1.41. The Negro rate was more than 30 percent in excess for each of the four diagnosis groups among young males, while only in the instance of respiratory diseases was there an excess for Negroes in the older age group.

TABLE 8.—*Frequency of sickness and nonindustrial injuries causing disability lasting 8 calendar days or longer, for specified environmental conditions, for the age groups under 35 years and 35 years and over, according to broad diagnosis groups, white MALE and Negro MALE employees in the slaughter and meat packing industry, 1930-34, inclusive*

Diagnosis group	Annual number of cases per 1,000 persons				
	White males			Negro males	
	All conditions	Sudden temperature change	High humidity or wet conditions	All conditions	High humidity or wet conditions
UNDER 35 YEARS					
Total, all diagnoses ¹	72.1	94.2	91.9	124.2	129.6
Nonindustrial injuries.....	12.2	17.3	14.0	23.7	24.3
Respiratory diseases.....	29.6	30.8	38.1	53.6	49.7
Digestive diseases.....	10.7	13.4	12.4	13.1	17.4
Nonrespiratory-nondigestive diseases.....	18.6	32.7	26.3	30.9	35.9
Number of person-years of membership.....	18,013.1	520.1	1,860.9	3,043.6	864.4
35 YEARS AND OVER					
Total, all diagnoses ¹	107.1	104.9	147.9	145.7	148.7
Nonindustrial injuries.....	14.2	17.3	19.3	15.9	17.1
Respiratory diseases.....	36.8	34.5	47.1	62.9	67.0
Digestive diseases.....	14.2	12.9	16.1	14.7	10.9
Nonrespiratory-nondigestive diseases.....	40.4	38.8	62.6	50.0	51.4
Number of person-years of membership.....	34,004.5	696.2	3,483.0	5,422.8	1,284.2

¹ Includes a negligible number of cases of ill-defined or unknown diagnosis.

NOTE.—See footnote 2, table 3.

Material exposures.—Material exposures are subject to the same limitations as environmental conditions. Degree is difficult to estimate accurately, because some persons may work with certain materials and yet be entirely protected from any possible harmful exposures, while other similar workers may not be safeguarded. Table 9 shows that the exposures for white males having a frequency rate of more than 100.0, in descending order of magnitude, were as follows: Hides and wool, glue and entrails, salt brine, and meats. Most of these groups were comparatively small, with only the last having more than 2,000 person-years of membership. Although these four groups had higher frequency rates and greater annual number of days of disability per person as compared with all exposures, yet the average number of days per case was less in two instances and only slightly greater in the other two exposures.

TABLE 9.—*Frequency of sickness and nonindustrial injuries lasting 8 calendar days or longer, annual number of days of disability per person, and average number of days per case, for specified material exposures, by sex and race, employees in the slaughter and meat packing industry, 1930-34, inclusive*

Material exposure	Annual number of cases per 1,000 persons	Annual number of days of disability per person	Average number of days per case	Number of cases beginning during 1930-34, inclusive	Number of calendar days of disability	Number of person-years of membership
WHITE MALES						
All exposures.....	95.0	3.16	33.3	4,951	164,949	52,138.8
Carbon monoxide.....	94.0	2.75	29.3	134	3,925	1,425.4
Fats, lards, oils.....	96.8	3.41	35.3	223	7,864	2,303.1
Meats.....	110.3	3.75	34.0	972	33,043	8,809.5
Salt brine.....	114.4	3.41	29.8	148	4,415	1,293.9
Glue, entrails.....	138.9	4.83	34.8	180	6,264	1,295.6
Hides and wool.....	143.9	4.43	30.7	275	8,454	1,910.5
All others.....	86.0	2.88	33.4	3,019	100,984	35,100.8
WHITE FEMALES						
All exposures.....	144.2	4.85	33.6	854	28,723	5,923.6
Meats.....	204.5	7.25	35.5	376	13,333	1,838.3
All others.....	117.0	3.77	32.2	478	15,390	4,085.3
NEGRO MALES						
All exposures.....	137.9	4.01	29.1	1,169	34,013	8,476.4
Meats.....	142.3	4.19	29.4	374	11,001	2,627.8
Glue, entrails.....	151.6	4.11	27.1	85	2,306	500.7
Hides and wool.....	188.3	5.05	26.8	136	3,647	722.1
All others.....	125.7	3.74	29.7	574	17,059	4,565.8

NOTE.—See footnotes 2 and 3, table 3.

The frequency rate for all exposures among Negro males was 45 percent higher than for white males. Again, hides and wool are most unfavorable, and glue and entrails are second. For Negroes the rate for the former is 188.3, which is 31 percent in excess of the white rate for the same group. For glue and entrails the rate is 9 percent in excess of the white rate. For both material exposure groups the Negro cases are of shorter duration than the white. This difference is of such extent that the number of days of disability per person among those exposed to glue and entrails is favorable for Negroes.

Among white females rates for exposures to meats were as follows: Frequency rate, 204.5; days per person, 7.25; and days per case, 35.5. It will be observed that these rates are higher than any material exposure group for white or Negro males.

Frequency by diagnosis group according to selected material exposures is shown in table 10. For white males under 35 years of age the following diagnosis groups were most unfavorable when the rate for the specific material exposure was compared with the rate for all exposures: Nonrespiratory-nondigestive diseases for meats,

respiratory diseases for salt brine and hides and wool, and nonindustrial injuries for glue and entrails. Among white males 35 years of age and over the most unfavorable diagnoses were digestive diseases for meats, respiratory diseases for salt brine, nonrespiratory-nondigestive diseases for hides and wool, and nonindustrial injuries for glue and entrails. Only salt brine, and glue and entrails had the same unfavorable diagnoses at both ages. Digestive diseases were high for persons exposed to glue and entrails and hides and wool, the excess amounting to 56 and 35 percent, respectively, for the younger age group and 46 percent for each in the older age group.

TABLE 10.—*Frequency of sickness and nonindustrial injuries lasting 8 calendar days or longer, by sex and race, for specified material exposures, according to broad diagnosis group and age groups under 35 years and 35 years and over, employees in the slaughter and meat packing industry, 1930-34, inclusive*

Diagnosis group	Annual number of cases per 1,000 persons									
	White males					White females		Negro males		
	All exposures	Meats	Salt brine	Glue, entrails	Hides and wool	All exposures	Meats	All exposures	Meats	Glue, entrails and wool
UNDER 35 YEARS										
Total, all diagnoses ¹	72.1	84.5	100.0	93.8	101.0	136.1	191.8	124.2	126.1	149.3
Nonindustrial injuries	12.2	13.2	9.3	25.0	16.2	15.6	20.5	23.7	21.6	33.2
Respiratory diseases	29.6	35.3	58.1	35.4	43.3	59.3	85.7	53.6	52.8	63.0
Digestive diseases	10.7	9.0	7.0	16.7	14.4	23.6	29.8	13.1	14.0	16.6
Nonrespiratory-nondigestive diseases	18.6	25.8	23.3	16.7	27.1	36.2	54.0	30.9	31.2	29.9
Number of person-years of membership	18,013.1	3,337.0	429.8	479.5	554.3	3,724.9	1,073.9	3,043.6	928.0	301.5
35 YEARS AND OVER										
Total, all diagnoses ¹	107.1	125.9	121.7	165.4	162.7	158.8	222.9	145.7	151.2	154.3
Nonindustrial injuries	14.2	15.5	12.7	25.7	20.8	15.6	19.7	15.9	16.5	23.1
Respiratory diseases	36.8	43.6	51.0	49.0	52.0	59.5	89.2	62.9	68.8	57.9
Digestive diseases	14.2	17.0	16.2	20.8	20.8	20.6	30.1	14.7	14.7	19.3
Nonrespiratory-nondigestive diseases	40.4	47.4	41.8	67.4	67.6	59.9	80.0	50.0	47.1	54.0
Number of person-years of membership	34,004.5	5,462.5	862.7	816.1	1,346.2	2,185.4	762.7	5,422.8	1,699.8	259.2

¹ Includes a negligible number of cases of ill-defined or unknown diagnosis.

NOTE.—See footnote 2, table 3.

White females exposed to meats had rates most in excess for nonrespiratory-nondigestive diseases when young and for respiratory diseases when older.

Negro males under 35 years working with glue and entrails and hides and wool had the greatest excess in rates for nonindustrial injuries; and those working with meats had the greatest excess for digestive

diseases. Among older persons the unfavorable rates were for non-industrial injuries for glue and entrails, respiratory diseases for meats, and nonrespiratory-nondigestive diseases for hides and wool.

It is interesting to note that high rates for digestive diseases are associated with exposures to glue and entrails for males of both ages and both races. Respiratory diseases are decidedly in excess for all classes of persons 35 years of age and over who are exposed to meats.

Rates by socio-economic class.—Table 11 gives rates by seven principal socio-economic classes. For white males the rate for professional persons and officials is slightly less than that for clerical workers. Semiskilled workers in manufacturing have a rate of 121.5 compared with 104.6 for laborers; this is contrary to the data for the soap industry, where laborers had decidedly the most unfavorable rate (6). Possibly the circumstance that semiskilled workers in the slaughter and meat packing industry were engaged chiefly in butchering, trimming, cutting, and boning may have influenced the higher rate. Laborers were widely distributed throughout the entire plant rather than concentrated in those occupations which had high rates.

TABLE 11.—*Frequency of sickness and nonindustrial injuries causing disability lasting 8 calendar days or longer, annual number of days of disability per person, and average number of days per case, according to socio-economic class, sex and race, employees in the slaughter and meat packing industry, 1930-34, inclusive*

Socio-economic class	Annual number of cases per 1,000 persons	Annual number of days of disability per person	Average number of days per case	Number of cases beginning during 1930-34, inclusive	Number of calendar days of disability	Number of person-years of membership
WHITE MALES						
All socio-economic classes.....	95.0	3.16	33.3	4,951	164,949	52,138.8
Professional persons and officials.....	66.4	2.14	32.2	142	4,566	2,138.6
Clerical workers.....	89.7	2.12	30.4	998	30,347	14,327.7
Skilled workers.....	98.4	3.61	36.7	872	31,976	8,859.8
Semiskilled workers in manufacturing.....	121.5	3.98	32.7	862	28,225	7,096.7
Other semiskilled workers.....	107.7	3.73	34.6	178	6,165	1,652.3
Laborers.....	104.6	3.51	33.6	1,816	60,932	17,355.1
Domestic laborers.....	117.1	3.86	33.0	83	2,738	708.6
WHITE FEMALES						
All socio-economic classes.....	144.2	4.85	33.6	854	28,723	5,923.6
Clerical workers.....	106.5	2.97	27.9	245	6,843	2,301.5
Semiskilled workers in manufacturing.....	190.0	6.70	35.2	473	16,673	2,489.4
Laborers.....	118.8	4.71	39.7	107	4,245	900.7
All other workers.....	125.0	4.15	33.2	29	902	232.0
NEGRO MALES						
All socio-economic classes.....	137.9	4.01	29.1	1,169	34,013	8,476.4
Semiskilled workers in manufacturing.....	172.9	4.74	27.4	326	8,932	1,885.3
Laborers.....	130.4	3.82	29.3	776	22,760	5,951.3
All other workers.....	104.7	3.63	34.6	67	2,320	639.8

NOTE.—See footnotes 2 and, 3 table 3.

Among white females and Negro males, semiskilled workers in manufacturing also had a most unfavorable position, with frequency rates of 190.0 and 172.9, respectively.

Days per case among white males were least for clerical workers and greatest for skilled workers, a difference which would probably be reduced if the rates could be made specific for age. There was greater variation with respect to socio-economic class for white females than for white males. The average number of days per case among white females ranged from 27.9 for clerical workers to 39.7 for laborers.

Figure 3 shows, by sex, the ratio of frequency rates for specified socio-economic classes to the rate for all classes. The same pattern is

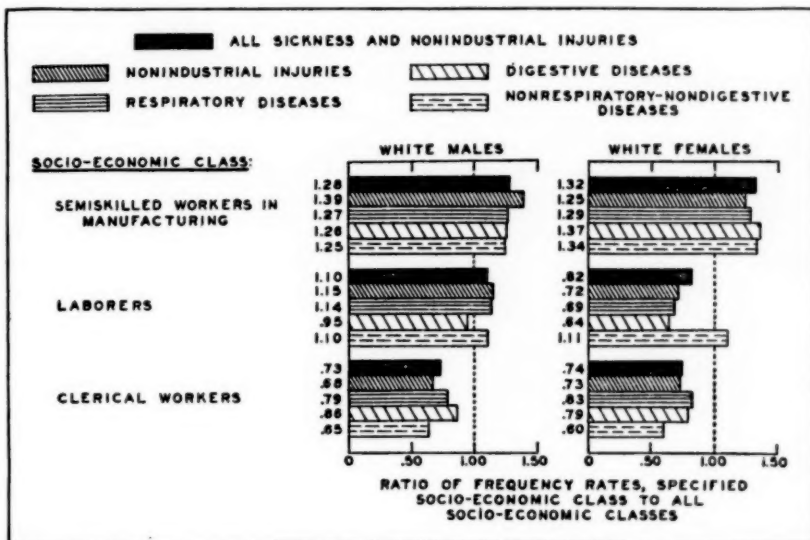


FIGURE 3.—Ratio of annual number of cases per 1,000 persons for specified socio-economic classes to annual number of cases per 1,000 for all socio-economic classes, according to broad diagnosis groups, white male and white female employees in the slaughter and meat packing industry, 1930-34, inclusive. Cases include disabilities from sickness and nonindustrial injuries lasting 8 calendar days or longer.

observed for white males and white females; both have the highest ratios for semiskilled workers in manufacturing, the next to the highest ratios for laborers, and the lowest ratios (below one) for clerical workers. Among white females the ratio decreases for each diagnosis group from semiskilled workers in manufacturing to laborers, but increases in all groups except nonrespiratory-nondigestive diseases when clerical workers are compared with laborers. While white males show a higher rate for laborers than for all socio-economic classes, the reverse is found to be the case for white females, who have a favorable rate for laborers. In the same socio-economic class there is comparatively little variation in the ratio of the various diagnosis groups.

In a previous study (7) it was observed that as the occupations of Negro and white males became more nearly alike the magnitude of the excess in the frequency rate of disabilities among Negroes tended to decrease if not to disappear entirely. This suggested that it was differences in the type of work performed, together with the associated economic status, rather than race per se which produced the unfavorable Negro health record when occupation was not held specific.

SUMMARY

This report deals with sickness and nonindustrial injuries causing disability lasting 8 calendar days or longer among persons engaged in the slaughter and meat packing industry. The annual number of cases per 1,000 was 95.0 for white males, 144.2 for white females, and 137.9 for Negro males,³ while the annual number of days of disability per person was 3.16, 4.85, and 4.01, respectively.

The occupations which had the highest frequency rates were cold meat workers among white males; scalers, wrappers, and packers among white females; and byproducts workers among Negro males. An excess of respiratory diseases was associated with these high frequency rates. Very excessive rates for rheumatic diseases were found in certain occupations, particularly warm and cold meat workers, sausage and casing workers, and curing workers.

An analysis of environmental conditions revealed that white males exposed to high humidity or wet conditions had the highest rates, with nonrespiratory-nondigestive diseases most in excess. Among white and Negro males the material exposures showing the highest rates were hides and wool, and glue and entrails. In the latter, digestive diseases were much more common than the average for all exposures.

White males and white females, when classified by socio-economic class, showed rates in decreasing order of magnitude as follows: Semi-skilled workers in manufacturing, laborers, and clerical workers.

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³ When standardized for age these rates become 97.0, 140.3, and 128.2, respectively.

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RICKETTSIA DIAPORICA: RECOVERY OF THREE STRAINS FROM *DERMACENTOR ANDERSONI* COLLECTED IN SOUTHEASTERN WYOMING: THEIR IDENTITY WITH MONTANA STRAIN 1¹

By GORDON E. DAVIS, *Bacteriologist, United States Public Health Service*

In the spring of 1938 three strains of a filter-passing infectious agent were recovered from *Dermacentor andersoni* collected from two areas in Albany County, southeastern Wyoming. Judged by gross pathology, by the morphology and staining reaction of organisms in spleen impression slides, and by cross-immunity tests these strains are identical with each other and also with the Montana strain reported recently by Davis and Cox (1).²

RECOVERY OF STRAINS

Strain 34.—Twenty-two male and 37 female ticks collected 6 miles southwest of Tie Siding were placed in a feeding capsule on a guinea pig which died afebrile 9 days later. At autopsy all organs appeared grossly normal, but there was extreme emaciation. Meanwhile the partly fed ticks, which were removed after 4 days of feeding, had been

¹ Contribution from the Division of Infectious Diseases, National Institute of Health, Rocky Mountain Laboratory, Hamilton, Mont.

² The 3 strains are designated as 34, 35, and 47 from the last two digits of the original guinea pig numbers.

ground in physiologic saline and injected intraperitoneally into a normal guinea pig. On the first and second days the temperatures were 40 and 40.6° C., respectively, followed by an 8-day afebrile period and a rise on the tenth day to 39.8° C., and 40.2, 40.4, 40.7, and 40° C. on the following 4 days. At this time the animal was sacrificed. The spleen was enlarged three times. Blood in fresh infusion broth yielded no growth. Spleen impression slides from the third transfer guinea pig stained by Giemsa and Machiavello's methods showed numerous intracytoplasmic rickettsia-like organisms. This strain was continued by blood and spleen tissue transfer.

Strain 35.—Twenty-eight male and 23 female ticks collected from the same general area as strain 34 were placed in a feeding capsule. On the seventh and eighth days the guinea pig showed temperatures of 40.4 and 40.2° C., respectively, and was killed for transfer. The spleen was enlarged two times. The guinea pig to which spleen tissue was transferred showed a temperature of 40° C. on the tenth day and remained afebrile until released. The partially fed ticks were injected into a fresh guinea pig. On the tenth to fourteenth days temperatures of 39.8, 40.1, 40.4, 40° C. were registered. On the fourteenth day the guinea pig was sacrificed. The spleen was enlarged five times. This strain was continued by blood and spleen transfers.

Strain 47.—Twenty-seven male and 29 female ticks collected 27 miles south of Laramie, on Fish Creek, were placed in a feeding capsule on a guinea pig which died afebrile on the fourth day. The spleen was enlarged four times. Two guinea pigs receiving portions of the spleen remained afebrile for 13 days and were released. The partially engorged ticks were injected into a fresh guinea pig which showed temperatures of 40, 40.6, and 41° C. on the eighth, ninth, and tenth days. At this time the guinea pig was sacrificed. The spleen was enlarged five times. This strain was continued by spleen-tissue transfer.

FILTRATION

A filtration experiment was performed by passing blood serum from the first transfer guinea pig (strain 35) through a Berkefeld W candle. Each of 2 guinea pigs received 1 cc. of the filtrate intraperitoneally. One showed temperatures of 40.8, 41, 40.8, 41, 40.8° C. on the seventh to eleventh days, respectively, and died on the fourteenth day. The spleen was enlarged about five times. The other showed temperatures of 40.6, 40.6, 40.6, 40.8, and 40.6° C. also on the seventh to eleventh days, respectively, and was subsequently immune to strain 34. Two guinea pigs received 1 cc. each of unfiltered serum. One showed temperatures of 40.6, 40.8, 40.4° C. on the sixth to eighth days, respectively, and died on the sixteenth day. The other showed

temperatures of 40.4, 40.2, 40, 40, and 40° C. on the seventh to twelfth days, respectively, and was subsequently immune to strain 34.

SURVIVAL OF THE INFECTIOUS AGENT FROM ADULT TO ADULT AND TRANSMISSION BY NYMPHS AND ADULTS

Four male and five female *D. andersoni* (Wyoming stock) were placed on a second transfer guinea pig (strain 35). The host guinea pig died on the tenth day when the ticks were only partially engorged. Spleen impression slides stained by Machiavello's method showed numerous rickettsia-like organisms. Thirty-five days later, two of the partially engorged females were placed on a second guinea pig to complete engorgement. This guinea pig showed a typical febrile period and was sacrificed on the tenth day. The spleen was enlarged approximately three times. One-half cc. of spleen suspension in physiologic saline was transferred to each of four guinea pigs. All died showing evidence of intercurrent infections.

Two guinea pigs were infested with larvae from the above females. One hundred and thirty-four engorged larvae were later removed. Neither guinea pig showed signs of infection. After molting, 63 of the above ticks, as nymphs, were placed on a guinea pig, which showed temperatures of 40, 40, 40, and 40.6° C. on the eighth, twelfth, thirteenth, and fourteenth days, respectively. On the fourteenth day the guinea pig was sacrificed. The spleen was enlarged three times.

Transfers by blood were made to two guinea pigs and by spleen to four guinea pigs. One blood-transfer guinea pig died after a febrile period of 6 days (6th to 11th). The other was subsequently immune to strain 34. One of the spleen-transfer guinea pigs died on the sixteenth day. The spleen was enlarged five times. One died the fifth day following immunity test, and two were immune to strain 34.

After molting, the above ticks, as adults, were placed on two guinea pigs. Seven males and 6 engorged females were removed from one guinea pig and 10 males and 14 females from the other. Both guinea pigs showed typical febrile periods and were subsequently immune to a controlled dose of the homologous strain. Parker and Davis have reported similar transmission experiments with the original strain from Montana (2).

CROSS-IMMUNITY TESTS

Reciprocal cross-immunity tests, Wyoming strains 34, 35, and 47 (figure 1).—Guinea pigs which had survived infection with one strain were tested in pairs for immunity against each of the other strains, except that only 1 guinea pig was used with strain 47 against strain

35. Equal numbers of controls were used. The 11 test guinea pigs showed complete immunity to the various test doses. Of the 12 controls, 3 died following typical infections and showed spleens enlarged 4, 5, and 6 times, respectively; 1 survived and 8 were used for the continuation of the strains. At the time of transfer the spleens of these 8 were enlarged as follows: 1 guinea pig \times 4, 4 \times 5, 1 \times 7, and 2 \times 8.

Strain 47 increased in virulence very rapidly. In one attempt to obtain recoveries each of six guinea pigs was given 0.3 cc. of infectious blood subcutaneously. The blood yielded no growth in fresh infusion broth. All died within 14 days. At autopsy the spleens varied in size from three and one-half to six times normal.

Montana strain 1 and Wyoming strains 34, 35, and 47 (figure 2).—Three guinea pigs (A23756 to A23758) which survived typical infections with the Montana strain each received 1 cc. of spleen suspension from Wyoming strain 34; three others which recovered (A37342, A36097, and A36080) received 0.5 cc. of spleen suspension from Wyoming strain 35; and two (A23762 and A23763) received 1 cc. of spleen suspension from Wyoming strain 47. There were two controls for each strain. Six of these animals remained afebrile; one that received strain 35, and one that received strain 47 each had 1 day of fever. All the controls showed typical febrile periods and one survived. Three that were sacrificed and two that died had spleens enlarged two to four times.

Wyoming strain 35 and the Montana strain (figure 3).—Five guinea pigs (A23218, A23219, A23226, A23227, and A23229), two of which (A23218 and A23219) had received 0.5 cc. of urine from the first transfer guinea pig of the Berkefeld W series, and all of which had survived typical infections with Wyoming strain 35, each received 1 cc. of spleen suspension from the Montana strain. All five guinea pigs remained afebrile over a period of 10 days. Two controls reacted typically. Both died, one on the nineteenth and the other on the thirteenth day, showing spleens enlarged three and one-half and six times, respectively. Three additional guinea pigs (A25545, A25570, and A23781), which had also recovered from typical infections with Wyoming strain 35, each received 1 cc. of spleen suspension from the Montana strain. All three remained afebrile over a period of 10 days. Two controls showed typical febrile periods. One survived; the other died on the thirteenth day showing a spleen enlarged about three and one-half times.

Wyoming strains 34 and 47 and Montana strain (figure 4).—Three guinea pigs (A23733, A25542, and A25567), which had survived typical infections with Wyoming strain 34, each received 1 cc. of spleen suspension from a guinea pig infected with the Montana strain. The three test guinea pigs remained afebrile over a period of 10 days.

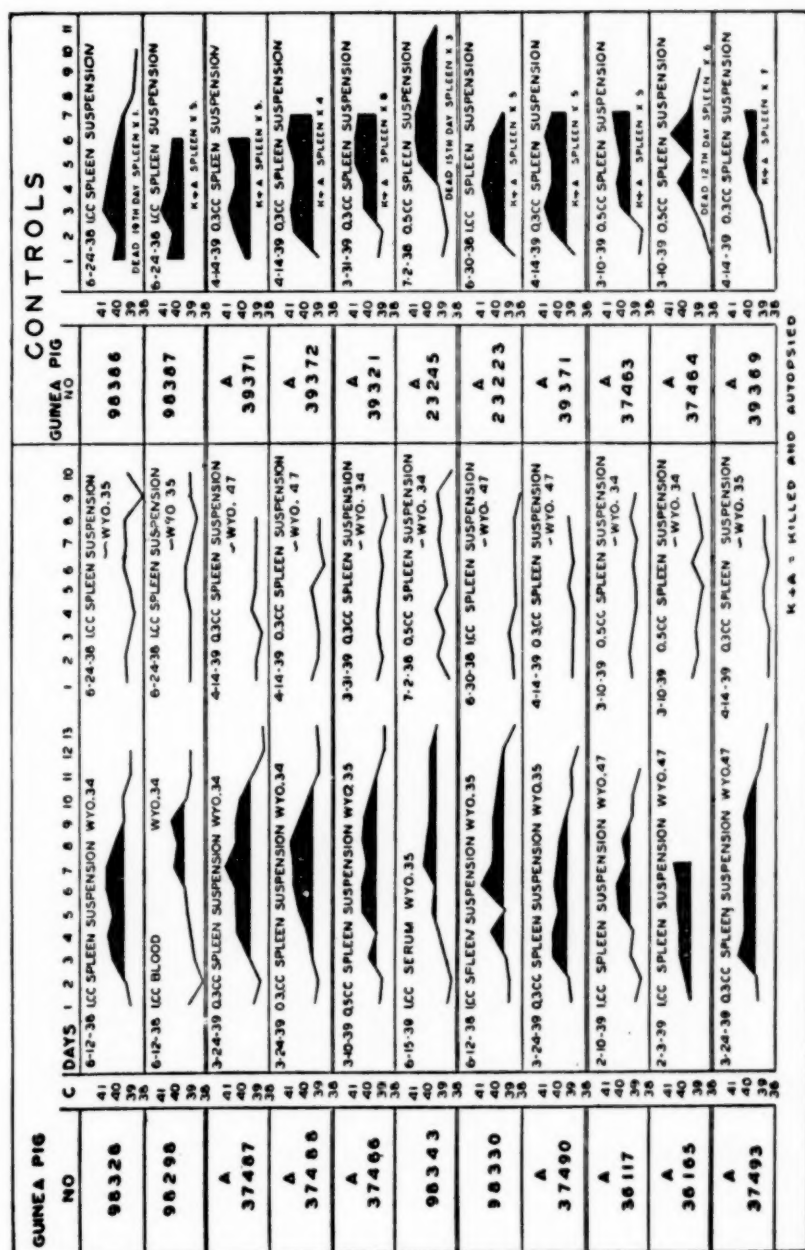


FIGURE 1.—Reciprocal cross-immunity tests, Wyoming strains 34, 35, and 47.

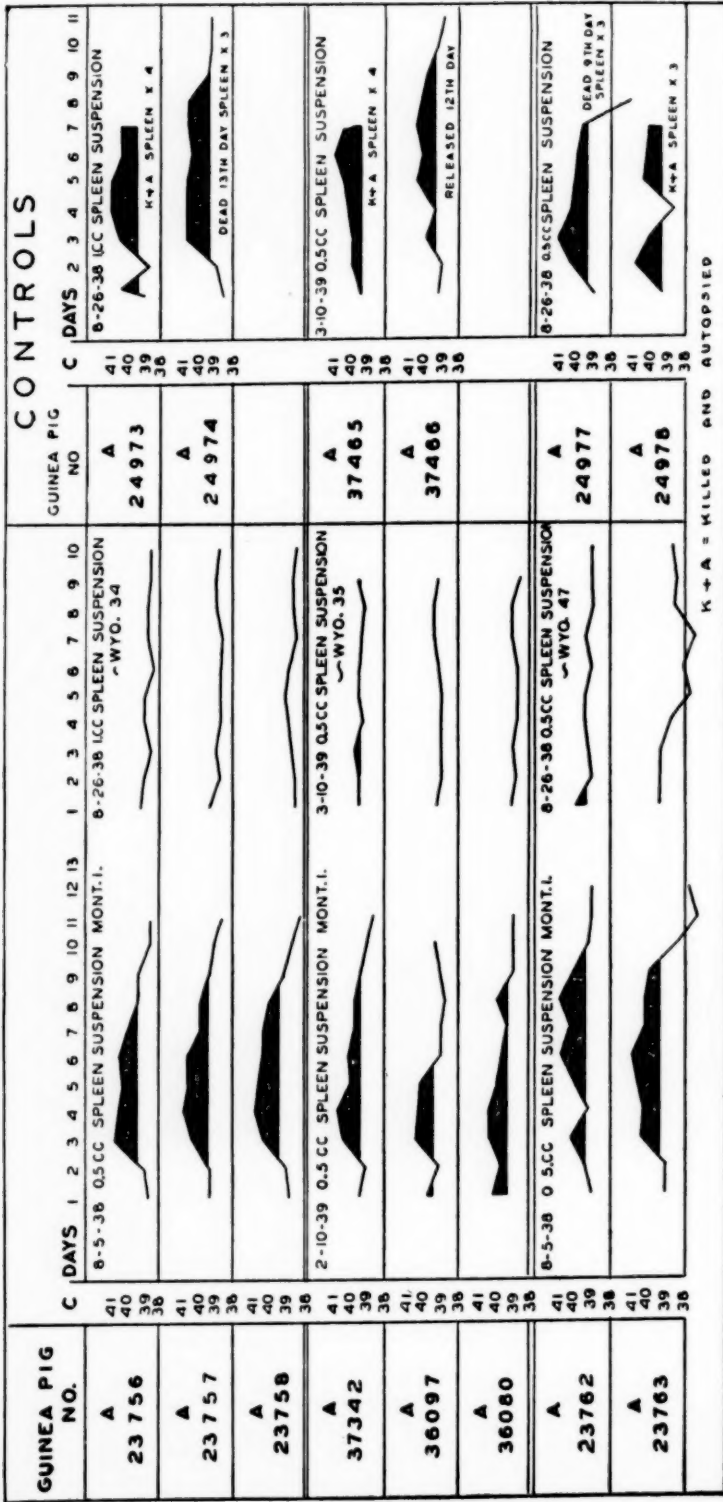


FIGURE 2.—Cross-immunity tests, Montana strain 1 and Wyoming strains 34, 35, and 47.

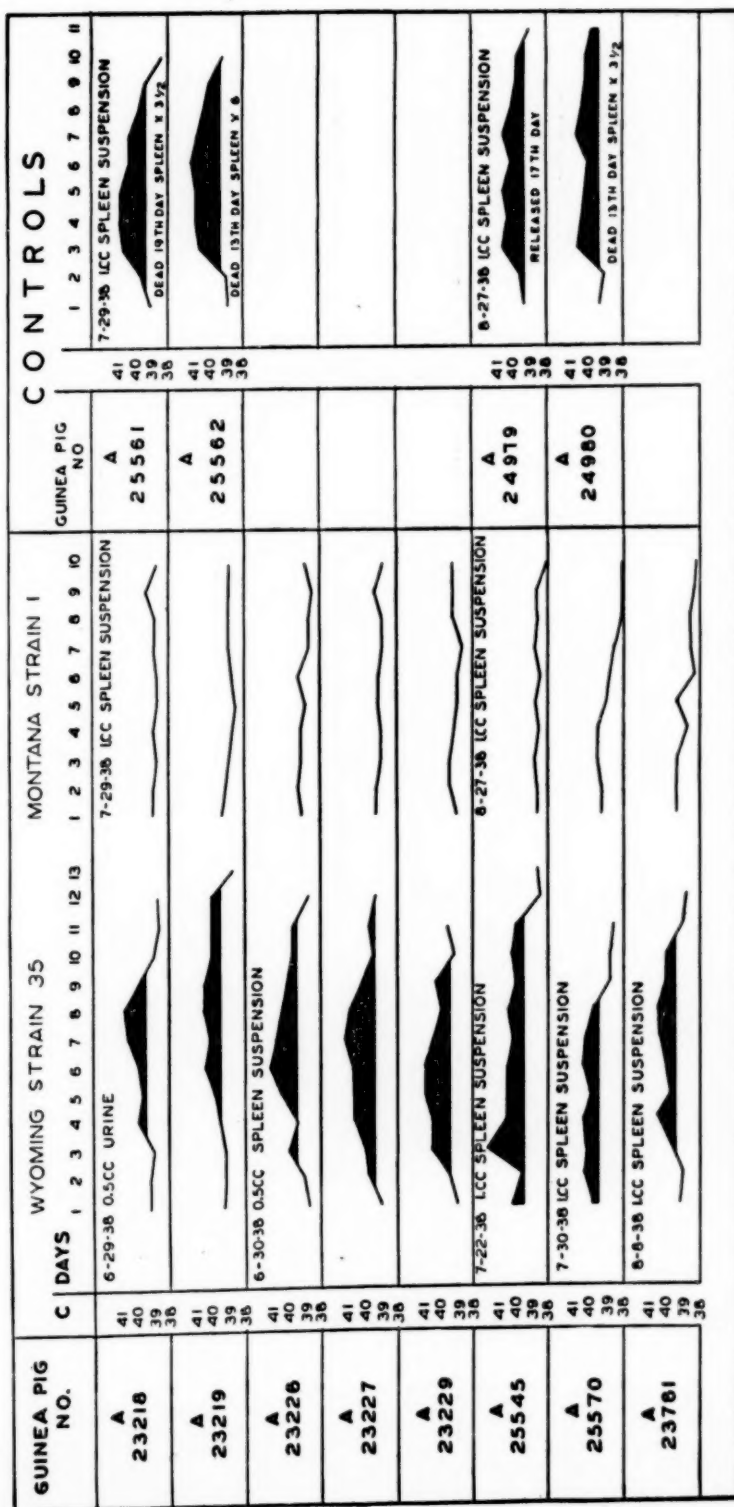


FIGURE 3.—Cross-immunity tests, Wyoming strain 35 and Montana strain 1.

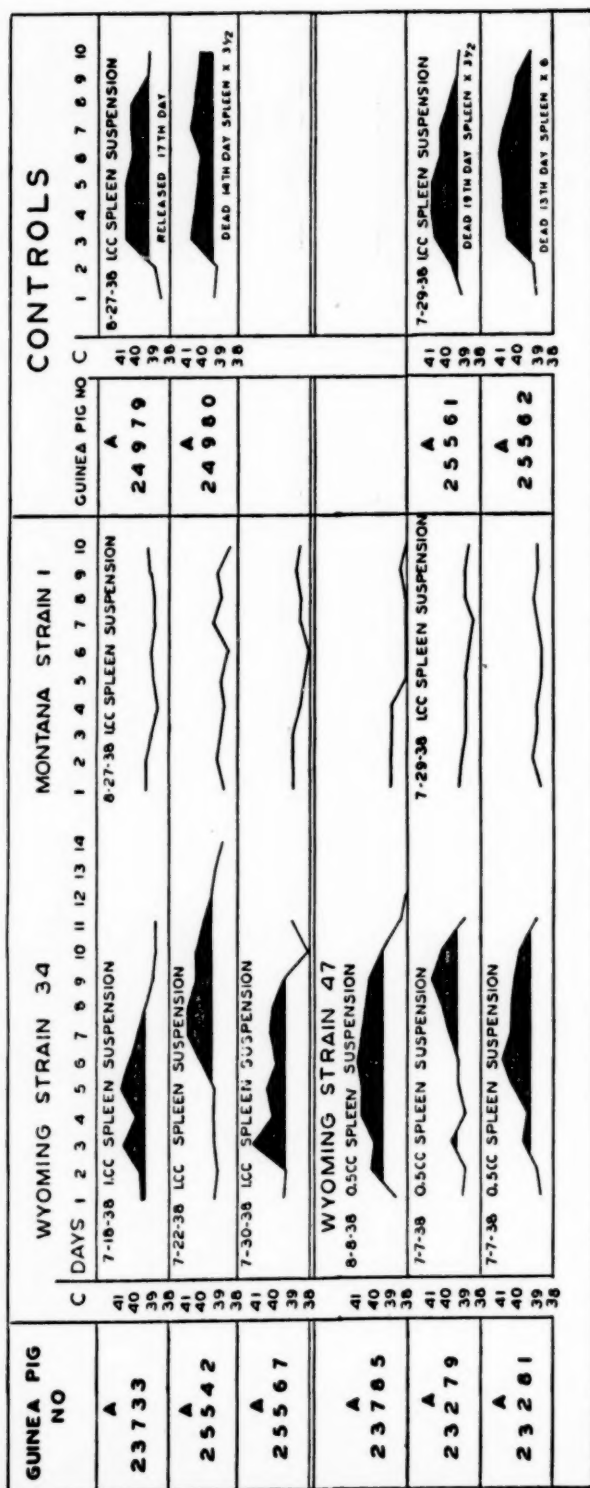


FIGURE 4.—Cross-immunity tests, Wyoming strains 34 and 47, Montana strain 1.

Two controls reacted typically. One was released on the seventeenth day; the other died on the fourteenth day, showing a spleen enlarged about three and one-half times. There was extreme emaciation.

Three guinea pigs (A23785, A23279, and A23281), which had survived typical infections with Wyoming strain 47, each received 1 cc. of spleen suspension from a guinea pig infected with the Montana strain.

The controls for A23785 were the same as for Wyoming strain 34. The controls for A23279 and A23281 were the same as for the first five guinea pigs, Wyoming strain 35 (figure 3). One of the four controls survived, following the usual febrile period, and three died showing the typically enlarged spleens.

SUMMARY

The recovery of three strains of a filter-passing rickettsia-like organism from *Dermacentor andersoni* collected in southeastern Wyoming is reported. The morphologic and tinctorial characteristics of the organisms, the reaction in guinea pigs, the experimental transmission by *D. andersoni* and cross-immunity tests with the original Montana strain of *Rickettsia diaporica* indicate that the three Wyoming strains and the Montana strain are identical.

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COURT DECISION ON PUBLIC HEALTH

Compensation for streptococcus pneumonia denied under workmen's compensation act. (Idaho Supreme Court; *Sonson v. Arbogast et al.*, 94 P.2d 672; decided September 28, 1939.) A dairy employee became ill suddenly with streptococcus pneumonia and because of such illness claimed compensation under the workmen's compensation act on account of personal injury resulting from accident arising out of and in the course of his employment. It appeared that the employee had been employed as a "plant man" by the dairy for a little over a month and that as a part of his duties he would work about an hour in the steam room (temperature of about 160°, hotter with live steam) and from there would go into the refrigerator room where the temperature was 34°, working in the latter place from 30 minutes to an hour.

The industrial accident board denied compensation and its order was affirmed by the supreme court. Such court, in sustaining the holding of the board that no accident was shown, said:

* * * The conditions under which Sonson was working were the same throughout the entire period of his employment. He performed his work in the same manner from day to day and was conscious of no mishap, hazard, or fortuitous occurrence nor misadventure to him or on his part. Under such circumstances, to say there was an *accident* would be to distort all definitions of the word and do violence to the common understanding of the language used by the legislature in writing sec. 43-1809, I. C. A. * * *

DEATHS DURING WEEK ENDED NOVEMBER 25, 1939

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Nov. 25, 1939	Correspond- ing week, 1938
Data from 88 large cities of the United States:		
Total deaths.....	8,002	7,883
Average for 3 prior years.....	¹ 7,968	
Total deaths, first 47 weeks of year.....	386,494	380,156
Deaths under 1 year of age.....	455	518
Average for 3 prior years.....	¹ 485	
Deaths under 1 year of age, first 47 weeks of year.....	23,303	24,570
Data from industrial insurance companies:		
Policies in force.....	66,543,128	68,303,373
Number of death claims.....	10,541	10,443
Death claims per 1,000 policies in force, annual rate.....	8.3	8.0
Death claims per 1,000 policies, first 47 weeks of year, annual rate.....	9.9	9.2

¹ Data for 86 cities.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

In these and the following tables, a zero (0) indicates a positive report and has the same significance as any other figure, while leaders (—) represent no report, with the implication that cases or deaths may have occurred but were not reported to the State health officer.

Cases of certain diseases reported by telegraph by State health officers for the week ended Dec. 2, 1939, rates per 100,000 population (annual basis), and comparison with corresponding week of 1938 and 5-year median

Division and State	Diphtheria				Influenza				Measles			
	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median
NEW ENG.												
Maine.....	12	2	45	2	18	3	3	1	229	38	16	16
New Hampshire.....	10	1	1	0	—	—	—	—	30	3	0	2
Vermont.....	0	0	0	0	—	—	—	—	590	44	1	7
Massachusetts.....	13	11	7	7	—	—	—	—	255	225	211	98
Rhode Island.....	0	0	0	0	—	—	—	—	603	79	0	1
Connecticut.....	6	2	3	3	6	2	7	6	98	33	73	43
MID. ATL.												
New York.....	9	22	29	29	13	14	11	14	149	373	616	397
New Jersey.....	23	19	12	21	15	13	10	14	14	12	21	31
Pennsylvania.....	19	37	61	35	—	—	—	—	31	61	48	48
E. NO. CEN.												
Ohio.....	36	47	62	62	48	62	—	28	35	45	11	65
Indiana.....	37	25	26	39	19	13	32	10	7	13	13	13
Illinois.....	29	45	47	47	10	15	10	16	14	22	28	28
Michigan.....	11	10	21	30	4	4	1	2	141	133	156	94
Wisconsin.....	4	2	3	4	19	11	48	34	79	45	101	82
W. NO. CEN.												
Minnesota.....	8	4	2	7	6	3	1	1	118	61	254	49
Iowa.....	8	4	19	17	2	1	—	1	75	37	49	8
Missouri.....	19	15	29	29	—	—	21	70	12	9	2	26
North Dakota.....	0	0	2	2	117	16	17	2	7	1	293	12
South Dakota.....	8	1	7	1	8	1	3	—	23	3	121	3
Nebraska.....	15	4	4	7	—	—	10	1	4	1	2	2
Kansas.....	39	14	6	11	25	9	10	4	215	77	9	9

See footnotes at end of table.

Cases of certain diseases reported by telegraph by State health officers for the week ended Dec. 2, 1939, rates per 100,000 population (annual basis), and comparison with corresponding week of 1938 and 5-year median—Continued

Division and State	Diphtheria				Influenza				Measles			
	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median
SO. ATL.												
Delaware ¹	0	0	5	2					59	3	3	2
Maryland ^{1,2}	34	11	3	16	9	3	12	7	15	5	63	38
Dist. of Col.	8	1	2	6	8	1	3	1	16	2	2	2
Virginia ¹	71	38	57	55	272	145	128		24	13	9	34
West Virginia	40	15	29	29	8	3	8	24	5	2	6	9
North Carolina ¹	92	63	64	64	9	6	1	5	199	136	141	141
South Carolina ²	90	33	20	12	3,223	1,180	293	239	3	1	7	7
Georgia ²	40	24	20	22	302	182	63		17	10	47	0
Florida	12	4	1	10	18	6	1	3	6	2	7	1
E. SO. CEN.												
Kentucky	28	16	21	21	21	12	16	17	10	6	76	69
Tennessee ¹	23	13	20	42	78	44	40	40	26	15	11	11
Alabama ²	51	29	43	36	308	175	56	103	19	11	19	18
Mississippi ^{1,2}	28	11	17	13								
W. SO. CEN.												
Arkansas	40	16	16	17	146	59	94	93	30	12	7	4
Louisiana ¹	41	17	30	25	7	3	11	11	2	1	83	8
Oklahoma	62	31	21	20	109	54	87	87	2	1	22	7
Texas ²	51	62	53	62	297	359	268	218	14	17	12	12
MOUNTAIN												
Montana	9	1	6	1	824	88	4	3	84	9	210	16
Idaho	20	2	2	2	10	1		1	92	9	55	49
Wyoming	22	1	0	0	284	13			175	8	3	2
Colorado	48	10	13	10	255	53	28		197	41	8	10
New Mexico	25	2	5	3	25	2	3	3	0	0	3	31
Arizona	49	4	6	6	797	65	121	56	12	1	2	1
Utah ¹	0	0	0	1	1,033	104	11		1,261	127	7	8
PACIFIC												
Washington	9	3	3	3					1,449	470	52	52
Oregon	35	7	1	1	119	24	15	18	139	28	7	10
California ¹	32	39	39	45	14	17	63	28	131	160	538	111
Total	29	718	883	883	130	2,756	1,510	1,123	97	2,399	3,425	3,425
48 weeks	18	21,824	27,138	25,748	163	165,468	58,689	112,880	306	363,819	781,008	697,734

Division and State	Meningitis, meningococcus				Poliomyelitis				Scarlet fever			
	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median
NEW ENG.												
Maine	0	0	1	0	0	0	0	0	72	12	18	18
New Hampshire	0	0	0	0	0	0	0	0	41	4	8	14
Vermont	0	0	0	0	0	0	0	0	54	4	9	9
Massachusetts	1.2	1	1	1	2.4	2	0	0	89	76	94	144
Rhode Island	0	0	0	0	0	0	0	0	23	3	12	20
Connecticut	0	0	0	1	0	0	0	0	110	37	43	38
MID. ATL.												
New York	0.4	1	5	6	6	16	3	3	107	368	292	371
New Jersey	4	3	0	1	2.4	2	0	0	198	166	73	90
Pennsylvania ¹	2.5	5	1	2	5	10	0	0	237	467	267	289

See footnotes at end of table.

Cases of certain diseases reported by telegraph by State health officers for the week ended Dec. 2, 1939, rates per 100,000 population (annual basis), and comparison with corresponding week of 1938 and 5-year median—Continued

Division and State	Meningitis, meningococcus				Pollomyelitis				Scarlet fever			
	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median
E. NO. CEN.												
Ohio.....	0.8	1	1	2	2.3	3	0	1	278	361	295	343
Indiana.....	1.5	1	1	1	1.5	1	0	0	227	153	161	161
Illinois.....	0	0	0	4	0.7	1	0	6	216	330	354	429
Michigan ¹	0	0	2	2	4	4	0	2	297	281	533	201
Wisconsin.....	1.8	1	0	0	5	3	0	0	265	151	159	232
W. NO. CEN.												
Minnesota.....	0	0	1	1	6	3	0	1	267	138	117	131
Iowa.....	2	1	0	1	20	10	0	0	174	86	71	71
Missouri.....	0	0	0	3	1.3	1	1	2	85	66	121	121
North Dakota.....	0	0	0	0	0	0	0	0	299	41	19	45
South Dakota.....	0	0	0	0	8	1	0	0	210	28	35	35
Nebraska.....	4	1	0	0	8	2	0	0	50	13	39	39
Kansas.....	0	0	0	1	0	0	0	1	279	100	145	139
SO. ATL.												
Delaware ⁴	0	0	0	0	0	0	0	0	472	24	25	8
Maryland ¹	0	0	1	3	0	0	0	0	160	52	17	75
Dist. of Col.....	0	0	0	0	0	0	1	0	129	16	14	14
Virginia ⁴	0	0	3	3	1.9	1	0	1	101	54	34	47
West Virginia.....	2.7	1	4	2	11	4	1	1	185	69	64	91
North Carolina ¹	1.5	1	2	2	0	0	0	1	148	101	59	62
South Carolina ¹	8	3	0	0	0	0	2	0	46	17	13	10
Georgia ²	0	0	1	1	0	0	1	0	63	38	22	28
Florida.....	0	0	1	0	0	0	0	0	15	5	0	7
E. SO. CEN.												
Kentucky.....	3	2	0	1	7	4	0	1	123	71	103	79
Tennessee ¹	0	0	1	2	1.8	1	0	0	113	64	61	61
Alabama ¹	1.8	1	5	2	4	2	2	2	69	39	22	27
Mississippi ¹	2.5	1	0	0	2.5	1	2	2	33	13	10	19
W. SO. CEN.												
Arkansas.....	0	0	0	0	2.5	1	2	1	42	17	22	22
Louisiana ¹	0	0	0	0	0	0	0	1	75	31	26	14
Oklahoma.....	0	0	0	0	0	0	0	0	48	24	42	42
Texas ¹	0.8	1	3	2	2.5	3	0	4	50	60	90	85
MOUNTAIN												
Montana.....	0	0	1	1	0	0	0	0	290	31	33	33
Idaho.....	0	0	1	1	71	7	0	1	122	12	17	23
Wyoming.....	0	0	0	0	22	1	0	0	196	9	8	8
Colorado.....	0	0	1	1	34	7	0	0	202	42	41	49
New Mexico.....	12	1	0	0	25	2	0	0	272	22	15	19
Arizona.....	0	0	1	0	0	0	0	1	49	4	5	17
Utah ¹	0	0	0	0	50	5	0	0	258	26	24	28
PACIFIC												
Washington.....	0	0	0	2	0	0	0	2	154	50	62	50
Oregon.....	5	1	1	1	15	3	0	2	119	24	45	45
California ¹	0.8	1	1	2	12	15	2	9	148	180	220	217
Total.....	1.1	28	40	75	5	116	17	70	154	3,880	3,959	4,624
48 weeks.....	1.5	1,621	2,666	5,073	6	7,036	1,633	7,091	122	147,380	171,461	204,483

Cases of certain diseases reported by telegraph by State health officers for the week ended Dec. 2, 1939, rates per 100,000 population (annual basis), and comparison with corresponding week of 1938 and 5-year median—Continued

Division and State	Smallpox				Typhoid and paratyphoid fever				Whooping cough		
	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases	1934-38, median	Dec. 2, 1939, rate	Dec. 2, 1939, cases	Dec. 3, 1938, cases
NEW ENG.											
Maine.....	0	0	0	0	0	0	3	2	296	49	56
New Hampshire.....	0	0	0	0	0	0	0	0	264	26	0
Vermont.....	0	0	0	0	0	0	0	0	952	71	52
Massachusetts.....	0	0	0	0	0	0	1	1	115	98	33
Rhode Island.....	0	0	0	0	0	0	1	1	107	14	30
Connecticut.....	0	0	0	0	0	0	0	0	202	68	77
MID. ATL.											
New York.....	0	0	0	0	3	8	8	9	167	416	639
New Jersey.....	0	0	0	0	5	4	2	4	187	157	361
Pennsylvania ¹	0	0	0	0	9	17	2	13	223	439	382
E. NO. CEN.											
Ohio.....	2	2	3	2	7	9	3	8	180	246	133
Indiana.....	6	4	47	5	1	1	5	4	107	72	14
Illinois.....	0	0	1	2	3	4	6	8	107	164	569
Michigan ¹	4	4	10	1	5	5	3	4	170	161	374
Wisconsin.....	0	0	3	6	0	0	0	2	248	141	426
W. NO. CEN.											
Minnesota.....	23	12	9	6	0	0	1	0	95	49	13
Iowa.....	12	6	16	5	2	1	3	1	24	12	26
Missouri.....	9	7	18	6	5	4	6	12	12	9	15
North Dakota.....	0	0	4	4	0	0	0	1	241	33	8
South Dakota.....	0	0	1	6	0	0	1	0	53	7	2
Nebraska.....	0	0	1	4	4	1	0	1	15	4	3
Kansas.....	0	0	1	5	3	1	2	3	14	5	22
SO. ATL.											
Delaware ⁴	0	0	0	0	20	1	0	0	295	15	12
Maryland ¹	0	0	0	0	15	5	5	5	216	70	31
Dist. of Col.....	0	0	0	0	8	1	0	0	154	19	20
Virginia ⁴	0	0	0	0	15	8	6	7	66	35	58
West Virginia.....	0	0	0	0	19	7	3	4	13	5	42
North Carolina ¹	0	0	0	0	1	1	1	5	67	46	220
South Carolina ¹	0	0	0	0	5	2	0	0	38	14	35
Georgia ¹	2	1	0	0	5	3	5	6	15	9	5
Florida.....	0	0	0	0	15	5	0	0	12	4	0
E. SO. CEN.											
Kentucky.....	0	0	0	0	10	6	3	8	155	89	20
Tennessee ¹	0	0	0	1	4	2	1	4	74	42	25
Alabama ¹	0	0	0	0	2	1	1	2	21	12	14
Mississippi ¹	0	0	0	0	8	3	0	7			
W. SO. CEN.											
Arkansas.....	0	0	0	1	17	7	3	4	22	9	29
Louisiana ¹	0	0	0	0	65	27	7	10	94	39	26
Oklahoma.....	0	0	18	2	8	4	5	14	10	5	4
Texas ¹	1	1	8	1	14	17	9	27	40	48	45
MOUNTAIN											
Montana.....	0	0	1	23	0	0	1	1	9	1	32
Idaho.....	0	0	8	1	10	1	1	3	0	0	0
Wyoming.....	0	0	0	1	22	1	0	0	284	13	3
Colorado.....	0	0	8	6	5	1	4	4	67	14	75
New Mexico.....	0	0	1	0	124	10	7	7	297	24	9
Arizona.....	0	0	0	0	0	0	1	1	37	3	2
Utah ¹	10	1	0	0	0	0	0	0	705	71	10
PACIFIC											
Washington.....	3	1	5	15	19	6	4	4	108	35	41
Oregon.....	0	0	1	1	15	3	1	2	119	24	24
California ¹	0	0	0	5	9	11	2	10	127	155	151
Total.....	2	39	164	164	7	188	117	238	123	3,042	4,168
48 weeks.....	8	9,161	13,686	6,823	10	12,265	13,715	14,555	137	162,828	194,975

¹ New York City only.

² Typhus fever, week ended Dec. 2, 1939, 71 cases as follows: Pennsylvania, 1; Maryland, 1; North Carolina, 5; South Carolina, 1; Georgia, 32; Tennessee, 9; Alabama, 8; Mississippi, 1; Louisiana, 3; Texas, 7; California, 3.

³ Period ended earlier than Saturday.

⁴ Rocky Mountain spotted fever, week ended Dec. 2, 1939, 2 cases, as follows: Delaware, 1; Virginia, 1.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

State	Diphtheria	Influenza	Malaria	Measles	Meningitis, meningococcus	Pellagra	Pollomyelitis	Scarlet fever	Smallpox	Typhoid and paratyphoid fever
<i>October 1939</i>										
Indiana.....	89	10	27	30	2	-----	19	320	24	8
Nevada.....	0	-----	-----	3	0	-----	0	41	0	0
North Carolina.....	642	11	58	235	3	5	19	404	1	21
North Dakota.....	2	10	-----	13	1	-----	2	69	4	1
Oregon.....	2	40	1	94	3	-----	16	61	1	13
Utah.....	2	10	-----	21	0	-----	32	45	0	3
Virginia.....	296	194	26	23	4	8	6	180	0	32

<i>October 1939</i>		<i>October 1939—Continued</i>		<i>October 1939—Continued</i>	
Chickenpox:	Cases	Mumps:	Cases	Tularaemia:	Cases
Indiana.....	92	Indiana.....	54	Indiana.....	6
Nevada.....	1	North Dakota.....	14	Utah.....	2
North Carolina.....	117	Oregon.....	58	Virginia.....	5
North Dakota.....	93	Utah.....	89	Typhus fever:	
Oregon.....	110	Virginia.....	41	North Carolina.....	11
Utah.....	160	Rabies in animals:		Virginia.....	1
Virginia.....	19	Indiana.....	36	Undulant fever:	
Dysentery:		Oregon.....	1	Indiana.....	8
North Carolina (bacillary).....	3	Rocky Mountain spotted fever:		North Dakota.....	1
Oregon (amoebic).....	5	Indiana.....	1	Oregon.....	1
Utah (amoebic).....	1	North Carolina.....	1	Utah.....	1
Utah (unspecified).....	11	Oregon.....	1	Virginia.....	1
Virginia (amoebic).....	1	Virginia.....	1	Vincent's infection:	
Virginia (bacillary).....	167	Septic sore throat:		North Carolina.....	1
Encephalitis, epidemic or lethargic:		Indiana.....	4	North Dakota.....	0
Utah.....	2	North Carolina.....	22	Oregon.....	12
German measles:		Oregon.....	3	Whooping cough:	
North Carolina.....	13	Utah.....	1	Indiana.....	155
North Dakota.....	1	Virginia.....	92	Nevada.....	2
Utah.....	15	Scabies:		North Carolina.....	260
Impetigo contagiosa:		Oregon.....	46	North Dakota.....	43
Oregon.....	69	Trachoma:		Oregon.....	83
		Virginia.....	1	Utah.....	178
				Virginia.....	121

WEEKLY REPORTS FROM CITIES

City reports for week ended Nov. 25, 1939

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities:											
5-year average	234	144	39	722	559	1,178	9	334	32	1,097	-----
Current week	115	132	29	374	406	745	1	277	26	725	-----
Maine:											
Portland	0		0	10	5	1	0	0	0	2	24
New Hampshire:											
Concord	0		0	0	0	0	0	0	0	0	6
Nashua	0		0	0	0	0	0	0	0	0	11
Vermont:											
Barre											
Burlington	0		0	0	0	0	0	0	0	0	12
Rutland	0		0	0	0	0	0	0	0	0	2
Massachusetts:											
Boston	0		2	13	13	18	0	6	0	26	214
Fall River	0		0	0	2	0	0	1	0	15	25
Springfield	0		0	1	0	1	0	2	0	8	37
Worcester	1		0	1	5	3	0	1	0	2	43
Rhode Island:											
Pawtucket	0		0	0	0	1	0	0	0	0	18
Providence	0		0	54	3	1	0	2	0	7	50
Connecticut:											
Bridgeport	0		0	2	0	4	0	2	0	0	30
Hartford	0		0	1	3	6	0	1	0	16	34
New Haven	0		0	0	1	0	0	0	1	0	44
New York:											
Buffalo	0		0	0	5	7	0	2	0	7	112
New York	16	7	4	18	69	85	0	71	4	92	1,406
Rochester	0		0	0	3	3	0	1	0	11	73
Syracuse	0		0	0	0	6	0	2	1	36	41
New Jersey:											
Camden	0		0	0	2	6	0	2	0	0	33
Newark	0		0	4	7	10	0	2	0	9	84
Trenton	0		0	0	2	1	0	1	0	0	27
Pennsylvania:											
Philadelphia	3		1	2	20	37	0	19	2	62	465
Pittsburgh	6	3	1	2	16	24	0	8	0	13	147
Reading	0		0	0	3	0	0	1	1	0	33
Scranton	0			0		0	0		0	0	
Ohio:											
Cincinnati	7		0	0	5	11	0	6	0	6	119
Cleveland	1	31	0	3	6	28	0	5	0	33	169
Columbus	3	1	1	1	2	6	0	1	0	3	73
Toledo	0	1	1	13	4	10	0	1	0	12	55
Indiana:											
Anderson	0		0	0	0	1	0	0	0	9	9
Fort Wayne	1		0	0	1	4	0	0	0	0	20
Indianapolis	0		0	4	5	20	0	2	0	17	103
Muncie	0		0	0	1	1	0	0	0	0	11
South Bend	0		0	0	0	3	0	0	0	0	16
Terre Haute	0		0	0	5	0	0	1	0	0	19
Illinois:											
Alton	0		0	0	0	0	0	0	0	1	2
Chicago	20	14	3	12	26	135	0	21	1	34	681
Elgin	0		0	1	1	1	0	0	0	1	11
Moline	0		0	2	0	0	0	0	0	1	9
Springfield	1		0	0	2	1	0	0	0	1	17
Michigan:											
Detroit	8		0	3	17	55	0	10	1	28	247
Flint	0		0	0	2	3	0	1	0	9	30
Grand Rapids	0		0	1	0	16	0	0	0	1	33
Wisconsin:											
Kenosha	0		0	1	0	0	0	0	0	4	8
Madison	1		0	0	0	0	0	0	0	8	18
Milwaukee	0	1	1	2	4	27	0	1	0	12	85
Racine	0		0	0	0	1	0	0	0	3	13
Superior	0		0	0	0	2	0	0	0	0	7

¹ Figures for Barre estimated; report not received.

City reports for week ended Nov. 25, 1939—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Minnesota:											
Duluth	0		0	29	0	0	0	0	0	0	19
Minneapolis	0		1	2	5	28	0	0	0	10	111
St. Paul	0		0	1	6	13	0	0	0	52	78
Iowa:											
Cedar Rapids	0			2		0	0		0	1	
Davenport	0			0		7	0		0	0	
Des Moines	0		0	3	0	16	0	0	0	0	34
Sioux City	0			0		4			0	2	
Waterloo	1			1		4	0		0	0	
Missouri:											
Kansas City	1		0	0	3	9	0	5	0	4	79
St. Joseph	0		0	0	4	3	0	0	0	0	27
St. Louis	6		0	3	9	9	0	5	1	2	224
North Dakota:											
Fargo	0		0	0	0	0	0	0	0	0	8
Grand Forks	0			0		0	0		0	0	
Minot	0		0	1	0	0	0	0	0	0	6
South Dakota:											
Aberdeen	1			0		2	0		0	0	
Sioux Falls	0		0	0	0	6	0	0	0	0	7
Nebraska:											
Omaha	0		0	0	5	0	0	0	1	0	56
Kansas:											
Lawrence	0		0	0	0	0	0	0	0	0	5
Topeka	0		0	1	3	8	0	0	0	0	12
Wichita	0		0	21	0	4	0	1	0	0	20
Delaware:											
Wilmington	1		0	1	4	5	0	0	0	13	26
Maryland:											
Baltimore	2	3	3	3	12	2	0	9	0	49	205
Cumberland	0		0	0	1	2	0	0	1	0	7
Frederick	0		0	0	0	1	0	0	0	0	4
Dist. of Col.:											
Washington	0		0	4	12	11	0	15	0	10	167
Virginia:											
Lynchburg	0		1	0	1	3	0	1	0	5	18
Norfolk	0	10	0	0	0	1	0	4	0	2	31
Richmond	1		0	6	5	5	0	1	0	0	55
Roanoke	1		0	0	1	2	0	0	0	0	25
West Virginia:											
Charleston	1		0	0	1	1	0	0	0	0	10
Huntington	1					0	0		1	0	
Wheeling	0		0	0	1	3	0	0	1	0	23
North Carolina:											
Gastonia	1			0		0	0		0	0	
Raleigh	0		0	0	1	4	0	0	0	0	8
Wilmington	2		0	1	2	1	0	0	0	0	12
Winston-Salem	1		0	0	1	2	0	1	0	0	24
South Carolina:											
Charleston	1	22	1	0	1	0	0	0	0	1	27
Florence	0		0	0	1	0	0	0	0	0	4
Greenville	0		0	0	0	0	0	0	0	1	4
Georgia:											
Atlanta	0	6	1	0	6	7	0	9	0	2	75
Brunswick	0		0	0	0	0	0	0	0	0	3
Savannah	0	13	0	0	2	0	0	1	0	0	34
Florida:											
Miami	0		0	0	2	0	0	0	0	0	33
Tampa	1	1	1	0	1	1	0	1	0	1	22
Kentucky:											
Ashland	0		0	0	0	1	0	0	0	0	5
Covington	0		0	0	1	1	0	1	0	2	17
Lexington	0		0	0	1	0	0	0	0	1	18
Louisville	0	2	0	1	7	11	0	1	0	22	83
Tennessee:											
Knoxville	1	2	0	0	1	11	0	0	1	0	20
Memphis	0	1	1	0	4	6	0	4	0	9	86
Nashville	0	1	1	0	12	1	0	0	0	2	63
Alabama:											
Birmingham	2	12	3	0	7	4	0	4	0	0	65
Mobile	0	8	1	0	1	2	0	0	0	0	18
Montgomery	1	4		0		0	0		0	0	
Arkansas:											
Fort Smith	0	1		0		0	0		0	0	
Little Rock	0		0	1	4	1	0	1	0	0	

City reports for week ended Nov. 25, 1939—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Louisiana:											
Lake Charles.....	0		0	0	3	0	0	0	0	0	8
New Orleans.....	1		0	0	15	5	0	10	6	32	180
Shreveport.....	0		0	0	5	0	0	2	0	0	57
Oklahoma:											
Oklahoma City.....	0	4	0	1	8	2	0	1	0	0	38
Tulsa.....	0			0		0	0		0	0	
Texas:											
Dallas.....	5		0	0	4	7	0	3	0	1	70
Fort Worth.....	1		0	0	4	15	0	1	0	5	44
Galveston.....	0		0	0	2	3	0	0	0	0	16
Houston.....	12		0	0	4	6	0	3	0	0	86
San Antonio.....	1		0	5	2	1	0	6	0	3	61
Montana:											
Billings.....	0	1	0	0	0	1	0	0	0	0	6
Great Falls.....	0		0	0	0	1	0	0	0	0	6
Helena.....	0		0	0	0	3	0	0	0	0	5
Missoula.....	0		0	0	1	3	0	0	0	0	5
Idaho:											
Boise.....	0		0	0	0	0	0	0	0	0	8
Colorado:											
Colorado Springs.....	0		2	0	1	3	0	0	0	0	8
Denver.....	3		0	2	4	3	0	3	1	6	76
Pueblo.....	1		0	1	1	0	0	0	0	0	10
New Mexico:											
Albuquerque.....	0		0	2	1	0	0	4	0	0	8
Utah:											
Salt Lake City.....	0		0	19	1	4	1	0	0	28	25
Washington:											
Seattle.....	0		1	6	2	2	0	2	0	2	88
Spokane.....	0		0	1	0	4	0	0	1	3	33
Tacoma.....	1		0	121	2	3	0	0	1	0	26
Oregon:											
Portland.....	0		0	0	5	5	0	1	0	2	81
Salem.....	0			0		0	0		0	0	
California:											
Los Angeles.....	2	6	1	6	5	25	0	7	1	13	266
Sacramento.....	1		0	0	3	5	0	3	1	0	41
San Francisco.....	1	1	0	5	7	6	0	8	0	20	160

State and city	Meningococcus meningitis		Polio- mye- litis cases	State and city	Meningococcus meningitis		Polio- mye- litis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Iowa:			
Worcester.....	0	0	1	Des Moines.....	0	0	2
New York:				District of Columbia:			
Buffalo.....	0	1	1	Washington.....	1	0	0
New York.....	4	2	1	South Carolina:			
Rochester.....	0	0	1	Charleston.....	0	0	1
New Jersey:				Louisiana:			
Camden.....	0	0	1	New Orleans.....	1	0	0
Newark.....	0	0	1	Shreveport.....	0	1	0
Pennsylvania:				Colorado:			
Philadelphia.....	1	0	0	Denver.....	1	0	1
Pittsburgh.....	0	0	1	Pueblo.....	0	0	1
Scranton.....	0	0	2	California:			
Minnesota:				Los Angeles.....	0	0	3
Minneapolis.....	0	0	2	Sacramento.....	0	0	1
St. Paul.....	0	0	1	San Francisco.....	0	0	2

Encephalitis, epidemic or lethargic.—Cases: New York, 2; Missoula, 1.

Pellagra.—Cases: Savannah, 2.

Rabies in man.—Deaths: Flint, 1.

Typhus fever.—Cases: New York, 1; Charleston, S. C., 2; Atlanta, 1; Mobile, 1; Montgomery, 1; Los Angeles, 2.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended November 18, 1939.—During the week ended November 18, 1939, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Que- bec	On- tario	Mani- toba	Sas- katch- ewan	Alber- ta	British Colum- bia	Total
Cerebrospinal meningitis				2	3					5
Chickenpox	2	20		251	330	51	48	61	90	853
Diphtheria			1	50	3	9	43	2		108
Dysentery				6						6
Influenza		81			15					100
Measles		5	1	180	228	17	2	4	23	460
Mumps				28	45	8			5	84
Pneumonia		12			8	1		1	3	25
Polio-myelitis				2	4					6
Scarlet fever	4	13	11	121	198	17	16	22	16	418
Trachoma						1	1		1	3
Tuberculosis		36	21	66	52	7	4	1		187
Typhoid and paratyphoid fever				20	2	2			1	25
Whooping cough		34	1	151	85	33	46	37	8	395

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—A cumulative table giving current information regarding the world prevalence of quarantinable diseases for a six-month period appeared in the PUBLIC HEALTH REPORTS of November 24, 1939, pages 2106-2119. A similar cumulative table will appear in future issues of the PUBLIC HEALTH REPORTS for the last Friday of each month.

Plague

Hawaii Territory—Island of Hawaii—Hamakua District—Hamakua Mill area.—One rat found on November 7, 1 rat found on November 8, and 1 rat found on November 9, 1939, in Hamakua Mill area, Hamakua District, Island of Hawaii, Hawaii Territory, have been proved positive for plague.

India—Cochin.—During the week ended November 18, 1939, 1 case of plague was reported in Cochin, India.

Smallpox

Iraq—Sulaimaniya Province.—During the week ended November 25, 1939, 19 cases of smallpox were reported in Sulaimaniya Province, Iraq.

Typhus Fever

Portugal—Oporto.—During the week ended October 28, 1939, 1 case of typhus fever was reported in Oporto, Portugal.

Trans-Jordan.—During the week ended November 25, 1939, 1 case of typhus fever was reported in Trans-Jordan.

Yellow Fever

Ivory Coast—Daloa (vicinity of).—On November 27, 1939, 1 case of yellow fever was reported in the vicinity of Daloa, Ivory Coast.

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